ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXIX. No. 14 NEW YORK AND CHICAGO Thursday, October 2, 1924

AMERICAN WRITING PAPER FACES FORECLOSURE

Bill in Equity Filed by Old Colony Trust Co. of Boston Seeks Foreclosure on Mortgage of $11,870,000 on Paper Company's Property—Plaintiff Asks That Property Be Sold and That Receiver Be Appointed to Take Possession of All the Property Subject to Mortgage—Sidney L. Willson, Receiver of Company, Looks Upon Proceedings as Friendly Legal Step

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., September 30, 1924.—The foreclosure proceedings brought by the Old Colony Trust Company of Boston against the American Writing Paper Company has been the absorbing topic of the week among the paper mill manufacturers in the valley and the impression is strong that this really, being a friendly suit, will work out to the good of the company. President Sidney L. Willson, receiver for the company, holds to this view and said this week that it might eventually enable the Company to forge ahead.

Receiver Willson's Statement

"This suit could have been brought anything within sixty days after the appointment of a receiver," he said, "and if carried through means that the bondholders can take over the property, and operate it. If I, or any one else, is appointed receiver under foreclosure proceedings much more power will be granted than at present as I am now merely a custodian of the funds."

The passing of the interest the past year gives opportunity for the bondholders to foreclose and take possession of the property. Having done so they may sell it in whole or part or operate it in whole or part under such management as they may elect.

Commends Mr. Willson's Work

George G. Bulkley, President of the Springfield Fire and Marine Insurance Company which holds bonds of the American Writing Paper Company, to the amount of $100,000, says that so far as he has been able to ascertain the business of the American Writing Paper Company, since Mr. Willson was appointed receiver has been quite satisfactory to the stockholders. "In fact, better than might have been expected in view of the prevailing business depression," he said. He understood that the bondholders committee had been working out a plan to raise money through the preferred stockholders in order to meet the obligations of the company. Since the death of A. Willard Damon his Company has not been represented on the bondholders' committee. He believed that the suit was instituted in a friendly spirit and to safeguard the interests of the bondholders.

Mr. Willson attended the meeting of the bondholders' committee in Boston the last of last week and came home well satisfied with the turn that affairs had taken. In the normal course of affairs, the bondholders on taking over the property are likely to organize a new company and buy the properties of the old. He could give no details as to the plan. As yet no date has been set for a hearing nor has there been any remonstrance up to date of present writing by the preferred or other stockholders. In truth there is little ground for it.

At any rate Mr. Willson is confident that the new development will not affect reorganization plans now under way for some time. The mills will continue to run as usual. Mr. Willson is confident that the lowest point in the industrial depression has been reached and that from now on the paper making business will improve, though he did not look for large improvement until after the election was over.

Rigid economies have been effected since Mr. Willson took charge including the closing down of a division in Lee and one in Huntington. The business of these two divisions has been transferred to Holyoke.

What Bill of Equity Asks

The bill in equity filed in the United States District Court at Boston by the Old Colony Trust Company declares the plaintiff's intention of foreclosing a mortgage of $11,870,000 on the defendant's property at West Springfield, Lee, Holyoke and Huntington.

The bill asks that the mortgage be decreed a first and prior lien against the property, that the mortgage be foreclosed, and the property sold and the proceeds applied to satisfaction of mortgage bondholders. The appointment of a receiver also is asked to take suitable action under the bill, though the concern already is in the hands of a receiver.

On Jan. 1, 1919, a mortgage was placed on all the concern's real estate, buildings, machinery, equipment, patents and trade marks, etc., for the most part situated as above. The mortgage provided that interest on the bonds be paid Jan. 1 and July 1 of each year. The bonds are ordinarily due in 1939. The mortgage provided that in case of default, or in the event a receiver was appointed for the property that the mortgage may treat the entire principal of said bonds as immediately due and payable and may foreclose. It was also provided that the mortgagee may operate the business and apply the profits to the satisfaction of the bondholders. Bonds totaling $11,870,000 are outstanding.

Defaulted Payments This Year

The concern defaulted payments Jan. 1 and July 1 of this year, it is alleged. It is also alleged that a receiver has been apopinted. The plaintiff, by the beginning of this suit, it says, signified its election that the entire principal of the bonds be declared immediately due and payable. The court is asked to declare the mortgage a first lien on the property and its proceeds, is asked to foreclose, and asked to apply the proceeds to the satisfaction of bondholders.

Communication from Mr. Willson

The following communication under date of September 30 has been received by the PAPER TRADE JOURNAL from Receiver Sidney L. Willson.

"The foreclosure proceedings instituted against the American

Writing Paper Company by the Old Colony Trust Company, as Trustee for the Bondholders, was a necessary legal action to protect the security holders, and also a necessary step to carry out reorganization plans.

"To those unacquainted with the internal affairs of the Company, and influenced by the usual comments concerning a suit of this character, I wish to state that any announcement, printed or oral, implying liquidation or impaired operations in thoughtless indifference to the interests of the paper industry.

"Our mills are today in better condition; our papers of better quality; our service better than for many years, and the past year's record for operations from every standpoint more satisfactory than hertofore.

"Our mills will continue to operate unimpaired, and no present or prospective customer need hesitate to entrust business to us because of the action referred to."

Nashua Package Sealing Co. Formed

The Nashua Package Sealing Company, Inc. has been formed to handle the gummed tape and tape machine business heretofore conducted as The Package Sealing Division of the Nashau Gummed and Coated Paper Company.

This change has been made necessary by the rapid growth of this Division—the increase in sales and in organization having reached a point where the most efficient conduct of both sales and production can be attained as an entirely independent business unit.

The sale of National Sealing Machines, National Corrugated Box Taping Machines and National plain and printed tape has always been handled by a separate force of salesmen under the direction of T. R. Gautier, sales manager and G. A. Coffin, assistant sales manager. The change of name involves no change in ownership or in the personnel of the organization.

The officers and directors are:—W. L. Carter, president; E. A. Carter, treasurer; Hubert L. Carter, clerk.

Questionnaire on Color Terminology

The committee on color terminology of the Optical Society of America is seeking the aid of leading paper mill men with a view to finding the most widely used set of color terms. For this purpose a questionnaire is being sent out. It is accompanied by a pamphlet on which is a cartoon showing an artist, physicist, psychologist and layman arguing as to the two colors in a large ball on a chart before them. The pamphlet says: "This situation shows how ludicrous are our attempts to describe color in the many conflicting terms that are in common use today. With the hope of finding the most widely used set of color terms, the committee on color terminology of the Optical Society of America has prepared a color questionnaire. In view of the obvious need for a clear understanding of descriptive color terms, it is asked that you give it your earnest consideration."

China Clay Found in New Ontario

China clay has been found in New Ontario and may turn out to be another industry from the soil, according to C. M. McCarthy, who is a diamond driller and prospector. Seven years ago he staked out two china clay claims on the Metagami river some 24 miles north of T. and N. O. railway above Cochrane, Ont. He has drilled in 200 feet of it in a block of 80 acres and has not hit the bottom yet. China clay is used in large quantities for paper coating and oilcloth filling. Many of the clay used for paper coating and oilcloth filling. Most of the clay used for paper coating comes at present from Cornwall, England, and the price for it raw at the mines is about $12 per ton. The clay has just been tested for Mr. McCarthy at the coated paper plant of the Georgetown Coated Paper Company, Georgetown, Ont., and tests are also being made in England and the United States. William Douglas, of Toronto, is associated with Mr. McCarthy in the venture.

R. S. Kellogg Speaks at Yonkers

[FROM OUR REGULAR CORRESPONDENT.]

YONKERS, N. Y., October 2, 1924.—"One modern paper machine produces more news print paper in a week than was used in a year in the United States a century ago," said R. S. Kellogg, Secretary of the News Print Service Bureau, speaking before the Rotary Club of Yonkers today.

"True paper has been made for 1800 years," said Mr. Kellogg, "but only within the past fifty years, with the application of power and machinery to the reduction of wood, a new raw material, has there been a cheap and abundant supply of this indispensable commodity. The ancient paper maker, working by hand, might make a thousand or more sheets a day. Now we use 100 horse power in the production of a ton of paper, and the labor of one man on high-speed machines gives the equivalent of 6000 times as many sheets as were turned out by his predecessor, who dipped his mold into a vat of fibres.

"With an annual consumption of 50 pounds of news print per capita and 100 pounds more of other grades, the United States uses more paper than all the rest of the world combined. There is a copy of a daily paper published for every family in North America, north of the Rio Grande, and in New York a daily paper is printed for every two persons in the state.

"The careless reader who buys anywhere from 25 to 200 pages of daily or Sunday newspaper, glances at headlines, and casts it aside, little realize what a marvel of modern integration and coordination of processes is required between the spruce tree in the distant forest and the newsboy's stand from which he gets a constant, up-to-the-minute report, in type and pictures, of world happenings in government, industry, science and sport. Huge electrically driven and controlled machines are making a sheet of paper a dozen feet wide and a mile long every five minutes, and presses of even greater complexity are printing newspapers at still higher speeds.

"If anyone doubts that we are living in a paper age, let him consult the Postmaster General and be told that the Post Office Department handles twenty-three billion pieces of mail annually, and that twenty-three thousand letters are mailed in the United States every minute of the year.

"There never was enough paper in the world until men learned how to make it from wood. News print paper and nearly all the other paper that we use is just as much a forest product as a shingle or a board. The continuance of a cheap and abundant supply of paper, so necessary to the conduct of affairs in our present stage of civilization, depends upon the care which we give to our forest resources.

"More timber has been destroyed by fire than has been put to any useful purpose since the discovery of America," said Mr. Kellogg in closing, "and three-quarters of the fires are due to some form of human agency, chiefly carelessness. We cannot continue to burn up our forests and have them too."

Correct Lubrication of Paper Mill Machinery

T. E. Dial, head of the Paper and Pulp Mill Division of the Vacuum Oil Company of New York, delivered a talk before the employees of the De Grasse Paper Company at Pyrites, N. Y., on Wednesday, September 24, which was also attended by employees from the Algonquin Paper Company at Ogdensburg. The talk was on "Correct Lubrication of Paper Mill Machinery" and was illustrated with moving pictures.

Mr. Dial has spent several years investigating the lubricating features of paper and pulp mill machinery and knows his subject thoroughly. He was highly complimented for his instructive talk.

Mr. Charlton, the general manager of the De Grasse mill in keeping with his policy of having his employees thoroughly posted on the intricacies of paper manufacture, is arranging for other talks by prominent men in the industry.

BIG NEWS PRINT CONTACT SECURED BY CANADIAN MILL

Price Bros. & Co. of Quebec to Supply London Daily Express With 15,000 Tons Per Year at a Cost of Over $1,000,000—Edward Beck Sees England as a Growing Factor in Canadian News Print Situation—Howard Smith Papers, Ltd., Pass Common Dividend—Exports of Pulp and Paper from Canada Declined During August—Shawinigan Water and Power Co. to Increase Its Capital.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., September 29, 1924.—Price Bros. & Co., of Quebec, have entered into a contract with the London Daily Express for the shipment of a large quantity of news print regularly to England. This contract was entered into during the recent visit to Canada of Lord Beaverbrook, proprietor of the Express. It is understood here that the agreement is for 15,000 tons per annum, which will mean a daily production of 50 tons and will represent a cost of over one million dollars per annum.

Edward Beck, manager of the Canadian Pulp and Paper Association, who has just returned from the Wembly Exhibition, where he represented the association, says that England should prove a very important factor in the news print situation so far as it concerns Canadian mills. He continues: "In spite of the fact that several English new print mills are increasing their output, everyone feels confident that the English market will absorb a great deal more news print than can be produced there, and that there is a market for Canadian paper on competitive conditions. The English publisher is paying today an equivalent of about £20 net per ton for his news print and Scandinavian paper can be secured for a little less. This is for the long ton of 2,240 lbs., as compared with the Canadian unit of 2,000 lbs. Thus there is very little difference in price between the European net and the Canadian. English paper buyers are so confident of their ability to market Canadian news print in England that a number are coming over to this country this fall to negotiate for a supply of paper from Canada. England will continue to be a very big market for Canadian pulp of the highest grade. Bleached sulphite is being used increasingly as a basis for artificial silk. The artificial silk industry is coming to be one of the most important in England. This demand for high grade bleached sulphite pulp for artificial silk is likely to concern the Riordon Company's output to the greatest extent. Already they are benefiting by it, as they are turning out a grade that satisfied this particular market, of a kind that was never thought possible in Canada before. There is a stable demand for Canadian groundwood pulp. I found a tendency for stiffening prices for pulp, and agents of Norwegian, Swedish and Finnish mills in England whom I consulted are all looking for a very strong market. They believe that we have come to the lowest level and that the next few months will see a better demand and better prices."

Pulp and Paper Exports Decline

The exports of pulp and paper from Canada for the month of August were valued at $10,905,420, which was a decline of $460,021 from the month of July. The decline was due to smaller exports of paper which dropped from $8,614,350 to $7,662,006, while pulp exports increased in value from $2,751,091 to $3,243,414. For the first eight months of the current year, the total value of the exports of pulp and paper amounted to $91,393,867, compared with a total of $92,920,867 for the corresponding months of 1923. Exports of paper for these months were valued at $66,127,636, an increase of $4,270,266 over last year's value; pulp exports were valued at $25,266,231, compared with $31,063,497 last year, a decline for the first eight months of this year of $5,797,266. Exports of pulpwood in August amounted to 104,794 cords valued at $1,173,996. For the first eight months of the year the exports of pulpwood were 894,072 cords valued at $10,083,428. Compared with the corresponding eight months of 1923, there was a decline in quantity of pulpwood exports of 153,295 cords, but an increase in the value of $164,813.

Howard Smith Passes Dividend

The directors of the Howard Smith Papers, Limited, have decided to pass the common dividend. In June last the dividend was reduced from 6 to 4 per cent, owing to marked depression in business and the reason now assigned for passing the dividend altogether is that during the past quarter business conditions have not improved materially. Although the company has actually earned a dividend on the common, not only for the quarter but for the preceding six months of this year, the official statement declares that the directors deem it prudent to withhold the payment of the common dividend until there is a distinct improvement in the trend of business generally in Canada, so that the company shall be enabled to maintain its liquid cash position on a conservative basis.

New Stock Issue By Shawinigan

A special general meeting of the shareholders of the Shawinigan Water and Power Company was held in Montreal for the purpose of authorizing an increase in the capital stock of the company by five million dollars. At a subsequent meeting of the directors an issue of two million dollars to the shareholders at par was decided on, at the rate of one share of new stock for every ten shares held, to shareholders of record the second of October. Subscriptions are to be made not later than November 1, 1924. It is understood that this financing is done for the purpose of taking care of the Shawinigan Company's interest in United Securities, Limited, and other purposes of the company. At the market price of Shawinigan stock, this issue will represent rights in the hands of the shareholders having a value of about $3.50 per share. This is the second time within the last few years that the shareholders of the Shawinigan Company have received valuable bonuses in excess of the regular 7 per cent dividend.

Glendale Mill of K. V. P. Co. Operates Successfully

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich, September 29, 1924.—The Glendale division of the Kalamazoo Vegetable Parchment Company, in operation for the past five months has passed through the experimental stage and is now an assured success, according to R. A. Hayward, general manager of the company and assistant to Jacob Kindelberger, president.

Every day about 20,000 pounds of waxed paper is being run through the plant, most of it being old stock that has been piled in the yards, while the mill was being whipped into shape. The results show a very fine quality of pulp is being produced and a large percentage of the wax is saved and reconverted for future uses.

By the process used the waxed paper is shredded and then passes through an extractor where the wax is washed off the paper with a chemical substance very similar to gasoline. The paper stock then passes into a steaming tank where the solvent is boiled off, the stock being carried over a washer and wet machine and is then ready to be again converted into paper. The solvent with the wax passes into a steam still, where the solvent is distilled and used again. The wax accumulates gradually at the bottom of this still and each week can be pumped off and used in the waxing department.

The Glendale division is operated with three shifts of seven men each, with four men working daytimes to take care of maintainance and handling the wax. George Smith is general superintendent in charge; Robert True being assistant and handling the night crew. The development of this division, thus making it profitable has required a long period of trying experimental work, but the problem has at last been solved.

CHICAGO MARKET STRONGER THAN FOR LAST SIX MONTHS

Prices Are Highest They Have Been for a Long Time Except in Case of Fine Papers—Kraft Mills Loaded Up With Business for Weeks Ahead—Paper Stock Suffers Light Reaction Which Is Looked Upon as Only Temporary—E. J. Cady & Co. Put Out New Automatic Micrometer—Box Board Association to Hold Next Meeting on October 8—Champion Co. Gets Extensive Write-up.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., September 29, 1924.—With but a few exceptions, and those in the coarse division of the paper industry, a general strengthening of the market took place last week. As a whole, prices are higher now than they have been for half a year or more in every branch but fine papers, where, while the tendency is not upward, demand grows each week and there are no weak spots discernible at all. All the bonds, coated papers and books, including every line taken by printers and publishers, are holding steady at prevailing market quotations with concessions gone and very little special stuff being offered. All slack in the market has been taken up and mills are running along at capacity with orders on file for from four to six weeks in advance, with this margin increasing from day to day. The printing industry runs now on full time and this alone is an excellent indication of the trend of demand.

The natural result of this activity on the industry in general is entirely what might be expected. Everybody is optimistic and no one sits back waiting for the business to come in. All realize it is there for the go-getters and are out after it in earnest. Some factors predict increases in various lines of fine papers, but still others feel that there will be no advances beyond the present level, unless some drastic shortage occurs, which is not very probable. While it was predicted that higher figures would go into effect on sulphite papers, there has not as yet been any evidence of it, and one well-known official of a large paper house here stated, in answer to the question, that he is of the opinion sulphite bonds will remain at present prices for some time to come.

Kraft Mills Loaded Up for Weeks Ahead

As an indication of what the coarse paper industry is experiencing at the present moment, a large merchant handling principally this class of paper stated that whereas only a comparatively short time ago he could get his orders through in a few days, now he must wait for fully nine weeks before he can get kraft through from several mills. Northern kraft mills in particular seem to be well loaded up with business and most of them have from six to eight weeks' orders on their books. Prices are firmer than ever, most of them having gone back to levels which they held before the summer dullness hit the market. Not only that, but many are of the belief that prices will go up very shortly. Industrial buyers getting back into the market again are cutting quite a big figure.

Latest reports from the board and container division of the industry are entirely favorable, prices now holding at levels much higher than they have been for several months. It is not expected that they will go higher but remain where they are now for the balance of the fall and winter. A large number of the box makers started activities again last week and with their return to the market it is expected considerable quantities of board will be cut up for this purpose. Mills are booked up pretty well in advance, many having sixty days' business on hand awaiting production. In all probably, these mills will not be caught up very soon, for some large consumers are again taking heavy quantities.

Paper Stock Has Slight Reaction

A slight reduction took place in the paper stock market last week. It was expected to do just what it did, drop off a trifle on some lines. Prices went straight up when the heavy demand came several weeks back. At that time figures were exceedingly low, the lowest they had reached over a long period. Demand being strong and stocks weak, it was the natural tendency for quotations to rise rapidly. They did. Everbody seemed to buy on a rising market, as they do in every industry. Then when high levels were reached, they stopped buying in such heavy volumes and of course, prices dropped off again. But this is only temporary, so the belief runs, and it will only be a matter of a week or so until upper levels will be in vogue again. There did not seem to be any anxiety to buy on the part of board mills last week. Good weather thus far brought in a large supply of stock so that accumulations now are nearer normal than they were since the summer period. Higher prices offered to collectors was another inducement to bring in paper stocks.

Cady Puts Out New Micrometer

E. J. Cady & Co., of this city, announces the addition to its lines of a new automatic micrometer which is now being marketed to the paper industry. It is quite an improvement as micrometers go and offers an especially effective and accurate instrument to the paper interests. E. J. Cady & Co. is operated by E. J. and G. W. Cady, specializing in automatic micrometer calipers, automatic paper scales and electric paper testers. A new paper tester operated by electricity was put on the market by Mr. Cady not long ago.

Only recently the firm moved from its previous headquarters on the second floor of the Engineers Building on Washington street and the Northwestern Railroad to the seventh floor of the same building, where lighter and more pleasant rooms are occupied.

Box Board Makers to Meet at Drake Hotel

The next regular meeting of the Box Board Association will be held in this city at the Drake Hotel, on Wednesday, October 8, according to announcement just made by John R. Mauff, general manager of the organization. The sessions will begin at 10:00 a. m. There are a number of questions of first importance at this time which will come up for discussion and officers of the organization are very desirous of a full attendance.

Champion Is Subject of Newspaper Writeup

Under the title "The Business Romances of Hamilton," a recent industrial edition of the Hamilton Evening Journal, of Hamilton, Ohio, published quite a writeup on the huge plant of the Chapman Coated Paper Company, located there. The story occupied most of two columns, picturing the unusual opportunities to the youth of that city offered to the great paper plant. A brief description was included, while considerable detail was given regarding the transition period through which the firm passed since its inception.

The Hamilton Evening Journal put out the "Industrial" edition to acquaint its readers with the great industrial enterprises contributing to the wealth of the community and furnishing employment to thousands.

Adopt Warehouse Forms

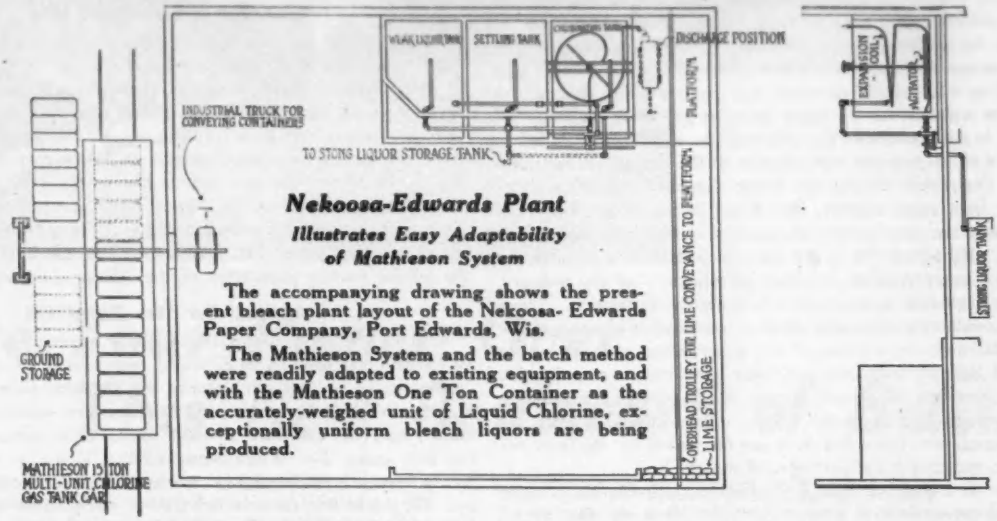
[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., October 1, 1924.—The adoption of uniform warehouse forms, as developed by the American Warehousemen's Association in co-operation with the Chamber of Commerce of the United States and the Department of Commerce, was approved at a general conference of warehousemen, banking and financial organizations, shipping groups and allied interests at the Department of Commerce here last week.

The meeting which was held under the auspices of the Simplified Practice Division of the Department of Commerce was attended by about 125 persons representing the various interested organizations.

R. M. Hudson, chief of the Simplified Practice Division, presided and the meeting was addressed by Secretary of Commerce Hoover and others.

MATHIESON System

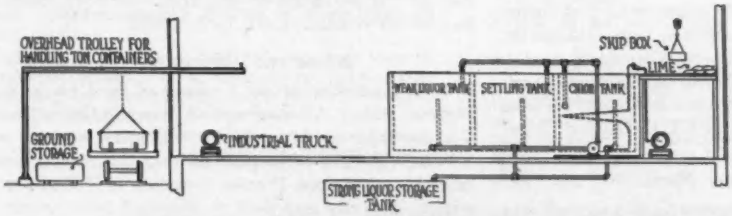


Nekoosa-Edwards Plant

Illustrates Easy Adaptability of Mathieson System

The accompanying drawing shows the present bleach plant layout of the Nekoosa- Edwards Paper Company, Port Edwards, Wis.

The Mathieson System and the batch method were readily adapted to existing equipment, and with the Mathieson One Ton Container as the accurately-weighed unit of Liquid Chlorine, exceptionally uniform bleach liquors are being produced.



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CANADIAN PAPER INTERESTS CONSIDERING CONSOLIDATION

George H. Mead, President of Spanish River Pulp and Paper Mills, Admits Such a Possibility for His Company and Abitibi Power and Paper Co.—Conditions Improving with the Paper Box Trade—Alfred J. T. Taylor Appointed Member of Commission to Investigate Swedish Pulp Industry—Cut of Pulpwood Below That of Last Season—Discovery of China Clay in New Ontario.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, September 29, 1924.—According to George H. Mead of Dayton, Ohio, President of the Spanish River Pulp and Paper Mills, the annual meeting of which was held in this city last week, the price of news print is likely to come down gradually. He stated that the tendency, along with other commodities, was to meet the ever increasing demand for lower prices. Mr. Mead thought that this condition was entirely economic and that a gradual reduction of selling price was best for the paper industry, providing compensating reductions in the manufacturing cost could be effected.

In regard to the possible consolidation of the Spanish River Company with the Abitibi Power and Paper Company, regarding which there have been many rumors, Mr. Mead intimated that such was on the tapis in the future, especially in view of mooted consolidations in Quebec. He added, "It is my personal judgment that, with the necessity for every possible economy, the tendency of any industry, not already organized in large units, is toward consolidation. There has been considerable discussion about a combination of some of the Quebec mills and, on account of the geographical position of the Abitibi and Spanish companies and their proximity, a consolidation has been considered as possible owing to the economic advantages which might accrue. However, nothing of a definite character has been developed and there has been no discussion of any sort regarding the matter for the past several months."

In answer to a question from a shareholder regarding the acreage of pulpwood cut down from year to year, Mr. Mead said that, at the present rate of production, the company was assured of a continuance of the supply of raw materials for many years to come. If, on the other hand, production was increased new sources would be needed.

The following officers were re-elected for the coming year: President, George H. Mead; vice presidents, Col. Thomas Gibson, Toronto, and P. B. Wilson, Sault Ste. Marie; Secretary, J. G. Gibson, Toronto; Treasurer, A. H. Chitty, Sault Ste Marie.

Paper Box Trade on the Mend

The regular quarterly meeting of the Toronto Carton Council was held recently at which representatives were present from the Canadian Paper Box Manufacturers' Association from Toronto, Hamilton, Brantford, Guelph and other cities. An address of welcome was delivered by S. J. Frame, Toronto, secretary-treasurer. He said that all signs pointed to the fact that the worst of the corner in depression had now been passed and that from now on, conditions would if not rapidly, surely and gradually improve. Generally speaking, he added that conditions in Canada were as good or better than anywhere else in the world. "While the corner had been turned," he declared, "we are still in an era of fierce world competition and, not by miracles, but by the exercise of sound business principles can business succeed."

C. T. Reid of Charles Reid & Co., Hamilton, spoke on "Avoidance of inflation as the market improves." George Hancock of the Galt Paper Box Company, Galt, delivered an interesting address on "Conditions in the small city." Mr. Hancock is president of the Canadian Paper Box Manufacturers' Association. George Boehmer of A. & C. Boehmer, Kitchener, presented a thoughtful paper on "Can the Golden Rule be applied to the paper box business?" Following the meeting at the Granite Club, a dinner was enjoyed and the members subsequently took part in a bowling tournament.

Toronto Man on Swedish Pulp Probe

Alfred J. T. Taylor, of Toronto, president of the Combustion Engineering Corporation, who had been in England for some time attending the world power conference and investigating the latest developments in power plant design, had just been appointed, with Dr. Johannes Ruth and Prof. Masawo Kamo, to conduct an extensive investigation throughout the pulp and paper industry of Sweden and Finland, with special reference to the economical use of steam. Mr. Taylor will devote a good deal of time to the Ruth accumulator and also to the methods used in Sweden for the drying of wood refuse, a new form of dryer having been recently developed, using waste gases from the boiler plant. Mr. Taylor will go from Sweden to Germany and is not expected back in Canada until the middle of October.

High Honor for Abitibi Man

At the annual meeting of the Boards of Trade of Northern Ontario, which was held recently at Elk Lake, E. W. Beatty, president of the Canadian Pacific Railway, spoke on freight rates and said operating costs must be met. Since 1898 wages of various classes of railway workers have gone up from 111 per cent to 350 per cent and there has been a corresponding increase in the cost of material and yet it was proposed to go back to the freight rates of those days. Alec Dewar, of the Abitibi Power and Paper Company, Iroquois Falls, Ont., was elected president of the Associated Boards of Trade for the coming year. Mr. Dewar is editor of the Broke Hustler, the official weekly publication of the Abitibi Company.

Pulpwood Cut Has Fallen Off

A. R. White, of Toronto, chief sanitary inspector for the province of Ontario, has been on an extended inspection of the pulpwood and lumber camps in Northern Ontario. He says that each year the sanitary conditions are improving and there are now seven hundred camps employing about seventeen thousand men. Discussing the pulpwood cut last season Mr. White remarked that it was so heavy that it would have a great bearing on production for the approaching winter. He thinks that Ontario and Quebec will produce only about one half of last year's cut of pulpwood. In some cases the wood cut last season remains in the bush unsold.

Notes and Jottings of the Industry

A. P. Costigane, Safety Engineer of the Ontario Pulp and Paper Makers' Safety Association, and Mrs. Costigane, have returned to Toronto from an extended trip to England.

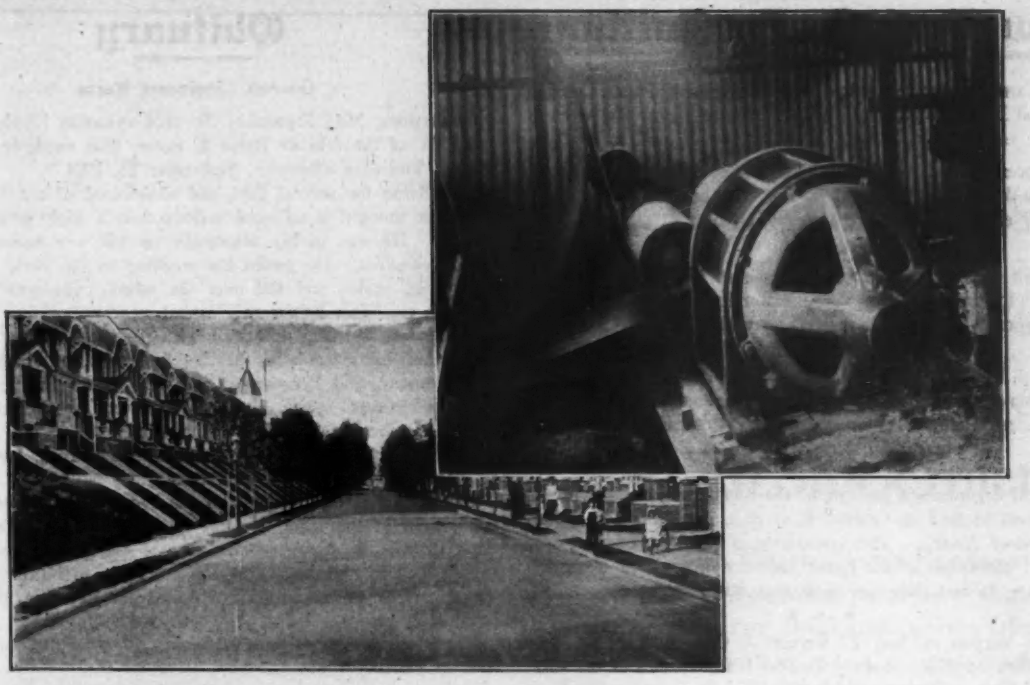
Fort William is after more hydro-electric power and a deputation recently waited upon Premier Ferguson in Toronto in regard to the matter. The city may need ten thousand horse power from the Hydro-Nipigon plant and if an ample supply can be secured Fort William looks for big industrial expansion.

The Great Lakes Paper Company, Fort William, whose pulp mill is now turning out one hundred tons daily of groundwood, is selling a large part of its product in Canada. The company will, it is understood, buy about three thousand cords of pulpwood monthly during the coming season in order to take care of its requirements.

Buntin, Reid Company, wholesale paper dealers, Toronto, have placed on the market a new line of paper known as Dove White book, which is made in Canada in all standard sizes and weights and possesses much strength and durability.

Arthur F. H. Young, son of W. L. Young, of the Canada Paper Company, Toronto, was recently married to Miss Jessie Edith Partridge, daughter of J. H. Partridge, Toronto. The young couple will reside in Toronto.

Lincoln Mills, whose offices are located at 43 King st. west, Toronto, will shortly remove into larger and more commodious quarters in the General Assurance building at the corner of Bay and Temperance streets.



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Pulmax Short Center Drive is the new way to transmit power. It is superior to open drives because by maintaining large arcs of contact, usually 220 degrees or more, it:

1. **Maintains a small initial tension in the slack side of the belt, usually 75 per cent that required by open drives. Consequently bearing pressure is usually less than half.**
2. **Compensates for any change in length of belt due to load conditions, atmospheric or permanent stretch—actual slippage is eliminated. Production is always up to normal.**
3. **Over 97 per cent efficient and requires much less attention than the open drive.**

Pulmax Short Center Drive saves power and effects other savings—in belting and floor space, cost of motors and generators, countershafting, etc.—which often means more to the engineer than increased power efficiency. The Pulmax Drive Catalog tells the story. Every production man should read it.

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SOUTH WALPOLE MASSACHUSETTS

Pulmax Dealers:—*Himmelein & Bailey, Inc., Philadelphia; Cleveland Tool & Supply Co., Cleveland; R. R. Street & Co., Chicago; Buffalo Mill Supply Co., Buffalo; Transmission & Belting Co., Pittsburgh; Teuscher Pulley & Belting Co., St. Louis.*

Pulmax Drive

7289

REG. U. S. PAT. OFF.

New York Trade Jottings

J. F. Carroll, superintendent of the Oswegatchie Paper Company of Natural Dam, N. Y., was a New York city visitor last week.

* * *

Announcement is made that the Fall meeting of the National Association of Waste Material Dealers, Inc., will be held at the Robert Fulton Hotel, Atlanta, Ga., on Tuesday, October 21.

* * *

The joint committee on Approved Chemists of the American Paper and Pulp Association has approved for listing Hyman L. Ramm of the National Paper Products Company of Stockton, Cal.

* * *

Arthur J. Wirth, formerly with the Fort Orange Paper Company of Castleton-on-Hudson, N. Y., as night superintendent, has become superintendent of the Fort Griswold Paper Company of Montville, Conn.

* * *

A general organization meeting of the Supply and Equipment Association will be held on October 8, at 10 a. m. at the Old Colony Club, Waldorf Astoria. This association is being organized to aid the Import committee of the Paper Industry in its work to protect the industry against improper European importations.

* * *

Paul E. Vernon of Jaul E. Vernon & Co., delivered his well known lecture on Morocco illustrated by lantern slides at the Bayside Men's Club on Monday, September 29. In appreciation of the entertainment that Mr. Vernon had furnished the Club unanimously made him an honorary member of that organization.

* * *

Victor Hvistendahl of Hvistendahl and Werring, Ltd., Christiania, Norway, is in this country, having arrived in New York city on Monday on the steamship Stavangerfjord. Accompanying him are the general manager and chief engineer of the Union Company, the largest paper manufacturing organization in Scandinavia.

* * *

Eugene F. O'Connor, Jr., of 44 Court street, Brooklyn, is notifying creditors of the Tissue Paper Syndicate, Inc., bankrupt, that a meeting of the creditors will be held at 10:30 a. m., October 9, at Room 405, Post Office building, Brooklyn, at which time the accounts of the trustee will be passed upon and a first and final dividend declared.

* * *

W. A. Munro of the Washington Pulp and Paper Corporation of Port Angeles, Wash., was in New York city last week. He was on his return to Washington after an extended trip in the east, visiting the chief news print mills and observing methods and equipment. He intended to spend a few days at the plant of the National Paper Products at Carthage, N. Y., which is owned by the principals of his company.

* * *

The New York Pulp Men's Golf Association will hold its tournament this year on October 15 at the Winged Foot Golf Club, Mamaroneck. There will be about 60 present and they will leave Grand Central Terminal in time to reach Mamaroneck about 9 a. m. The program will be golf from 9 to 12.45 o'clock, luncheon from 1 to 2 o'clock, golf from 2 to 6 o'clock, refreshments from 6 to 8 o'clock and dinner at 8 o'clock.

Belgo-Canadian Reduces News Print

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 30, 1924.—The Belgo-Canadian Paper Company, has reduced the price of news print $3 a ton for 1925. The new price is $70.

Obituary

Gordon Lippincott Reese

BALTIMORE, Md., September 29, 1924.—Gordon Lippincott Reese, aged 46, of the firm of Reese & Reese, died suddenly of a heart attack, Thursday afternoon, September 25, 1924.

Mr. Reese for several days had complained of not feeling quite well, but thought it no more serious than a slight attack of indigestion. He was in his automobile on his way home, when the attack occurred. He pulled his machine to the curb, put on the emergency brake, and fell over the wheel. He was dead when taken to the West Baltimore Hospital, nearby.

Mr. Reese had been identified with the paper industry of Baltimore since early manhood, starting first with the Hubbs & Corning Company, and later organizing with James Bradley, the firm of Bradley-Reese Company. After several years he withdrew, though the firm retained the original name.

For some years Mr. Reese lived in New York, having direct representation of several well known paper mills.

He enlisted at the outbreak of the World War in the Artillery, and served at the front in some of the big engagements. After the Armistice his company was sent to Germany. Upon his demobilization in 1919 he returned to his home in Baltimore, becoming a partner of his brother, Howard H. Reese in the firm of Reese & Reese.

Mr. Reese was known to mill men all over the country. He was an expert in paper values, knowing the industry in all its phases.

Besides his brother, Howard H. Reese, Reese is survived by his mother, Mrs. Harry S. Reese, a sister, Mrs. Maurice Butler, and two sons, Charles Ford Reese and Addison Reese.

Harry W. Hitt

[FROM OUR REGULAR CORRESPONDENT.]

DALTON, Mass., Sept. 30.—Harry W. Hitt a veteran papermaker and mill superintendent is dead here. He was born in England and educated there coming to this country to learn the trade of papermaking when nine years old. His first position was with John B. Smith & Co. at Russell. From Russell he went to the Cummington mill of Nelson Shaw & Co. and then moved to Dalton and went to work for Crane & Co. In 1863 he entered the empoly of the late Byron Weston and was in charge of the finishing room and loft work for 15 years when he was appointed superintendent of the mill, a position he held until his death. He retired from active service in 1910.

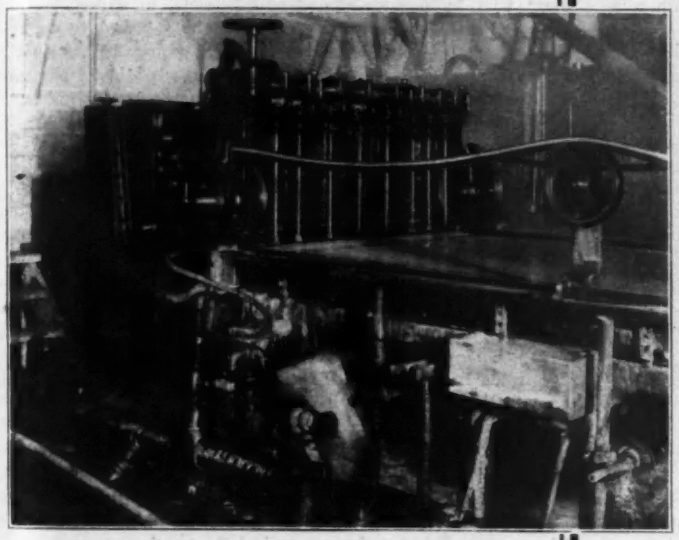
He saw the mill grow from a 42 inch machine producing 600 pounds of paper daily to a mill operating two 66-inch machines and producing 7400 pounds daily. Mr. Hitt received in 1894 a diploma from the Columbia Exposition at Chicago for excelling in the manufacture of ledger paper.

Leon Spaulding

Leon Spaulding, aged 51 years, a member of the Spaulding Fibre Company, and manager of the plant of the company at Tonawanda, N. Y., died recently at his summer home at East Sebago, Me., following a year's illness due to heart trouble. He was born in Townsend Harbor, Mass. For thirty-five years he was a member of the Spaulding firm. The first ten years of his association with the company he was located in North Rochester as head of the local plant. When the company opened its plant at Tonawanda, N. Y., for the manufacture of vulcanized fiber, he was placed in charge. He was an extensive traveler having toured Europe several times by motor. Surviving him are the widow, two brothers, former Gov. Rolland H. Spaulding and Huntley N. Spaulding, of Rochester, and a sister, Mrs. Marion Potter, of New York.

4 Reasons

Why Paper Mills *are* Installing *the* Voith Stock Inlet



The above illustration pictures an installation of the Voith Inlet in a Wisconsin mill. It enabled the Wisconsin manufacturer to cut variation in paper caliper by 75% and worked so well that he ordered another inlet.

We have an attractive booklet ready for you telling of this and other similar instances. Write for your copy today.

1. The Voith High Pressure Stock Inlet makes possible a sheet of uniform thickness across the entire width of the machine, through adjustments easily and quickly made.

2. It eliminates aprons and slices, gives the entire surface of the wire for formation purposes and thus improves the formation of the stock, and eliminates lumps and foam spots.

3. It makes possible the feeding of the stock to the wire at any speed desired. The stock is fed onto the wire at the breast roll as fast as is necessary.

4. By eliminating aprons and slices the friction that they cause on the wire is done away with, thus lengthening the life of the wire.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

HEALTH SERVICE WORK IN PAPER MILLS*

By Louis H. Frechtling, M. D., of the Dept. of Industrial Relations, Champion Coated Paper Co.

Industry depends for its very life upon production, the making of commodities from raw materials—usually in this day by machines operated by men or women—and so fabricated that they can be readily sold by those upon whom that duty falls. It has long been the aim of those in charge of the management of industry to make products that are uniform, are made with the least amount of waste, and the minimum expenditure of time, material and labor. Singularly management gave the major portion of its attention to materials and machinery and almost ignored the most important—the human element. During the last quarter of a century, however, there has been an awakening to the importance of this element and, in many industrial organizations, there are departments which deal entirely with problems pertaining to the employees in that industry. These departments have been designated in many ways. Some are known as personnel departments, others as welfare, still others as educational and some as industrial relations departments. The activities of these departments are varied. We are to deal with but one of the activities in this paper—health service work in paper mills.

The Basis of Efficiency

Health service work in paper mills does not vary from health service work in other industrial fields. The underlying principles are the same. They are based upon the fact that health denotes mental, moral and physical well being, and that it therefore is the basis of efficiency. Health service has a part in selecting the worker for a certain job, based upon his physical and mental fitness to do the work expected of him, and often, when he has been placed upon the job, health service has a part in maintaining his health by removing or safeguarding such hazards as may exist, jeopardizing health or limb, or in case of accidental injury, returning the worker to society and industry in the condition as near to normal as it is possible to return him. Such a service as one writer puts it: "In a multitude of untold ways and directions, all such service is twice blessed: it conserves the ability to serve, and it conserves the ability to enjoy."

For the purpose of this study we may subdivide health service work into the following divisions:

1. Medical service.
2. Surgical service.
3. Dental service.
4. Nursing service.
5. Sanitation.

Medical service may be made to include physical examinations of all new employees with periodic re-examination for all employees, clearance of all employees who have been absent from work, medical attention to all employees who care to avail themselves of the opportunity, medical advice and instruction.

The introduction of the majority of workers in a plant to health service comes at the time of their physical examination. If "first impressions are lasting impressions" it behooves the physician who makes the examination to make that impression favorable to not only the health service of the plant but to the entire organization as well. A few minutes taken at this time will often accomplish much more than one can hope to accomplish later. The new employee has a right to know why you are making an examination. If he is rejected he has a right to know why he is rejected. If he has a defect of such magnitude that he should protect himself, he should know of that defect, and what he should or should not do. He should know that physical examinations are made only as an adjunct to placement. He should know that when you hire him and place him on a job you are considering not only your duty to him but also your duty to your other employees, the management, your customers and to society as a whole. A man requires work in order that he may discharge his economic and social debts to society. But in accepting work he should not be asked to accept employment which will aggravate existing defects or cause new ones or which is beyond his mental and physical power to accomplish. Those whom he will work with have a right to expect that the new employee be free from any infectious or contagious disease which they might contract. They also have a right to expect that the new employee be physically fit to do the work expected of him lest a portion of it fall to the lot of those who are employed with him. The employer has a right to expect that the new employee will, by physical and mental make-up, be able to perform the task assigned to him and so remain a contented and safe worker at the work which is his to do. The customer who buys your product has a right to expect that the employee be capable of doing the work he is asked to do as it will be reflected in the product. Finally, society has a right to expect that the new employee be placed at work he is physically fit to do lest through accident or disease he be lost to his family and the care of those dependent upon him fall upon society.

Physical Examination an Aid

Physical examination as an aid to placement is a great factor in stabilizing plant turnover. Fear is a great deterrent in industry. Place an employee at work which he is physically and mentally unable to do and at least one of two things is likely to happen: either your employee will leave or he will get hurt. Fear will be the cause in either case. In our own organization we have had several experiences which have sold us the value of the physical examination. For a long time we had the experience that most paper mills have had with Super Calendars. There was scarcely a month that we did not have one or more men off because of crushing injuries to their fingers. When we began our work in industrial relations more than five years ago, the employment—production—and medical service got together and determined upon the ideal type of man for calendar work, as well as other work. That type of man is now employed, if it is possible to get him, and our experience so far as mashed fingers from calendars are concerned are a thing of past history. It has now been more than a year since we have had a calendar injury.

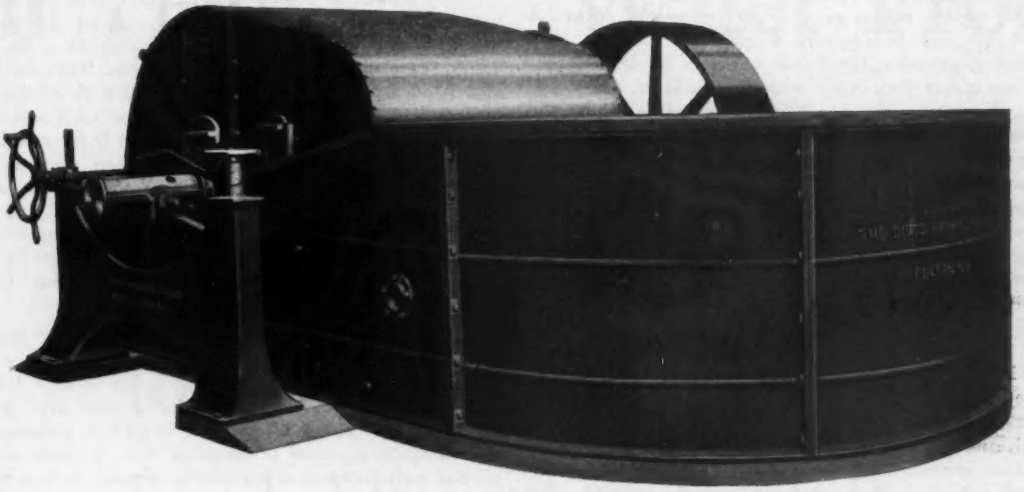
During the time we have been operating, our medical department has made 8,395 physical examinations. We have had but few who have objected to the examinations. It is our procedure to classify all of our men and women in one of four classes. The Class A are those who have no physical defects which we can discover. Class B are those who have slight defects but none which would make them a hazard on any job in our mills. Class C are those who have defects which are of sufficient magnitude to require that they placed on certain definite limited work. In this class one would place hernias, defective vision up to a certain degree, heart lesions which are compensating and the like. Class D is our rejection Class. Making up this latter class are those with infectious or contagious diseases, those with heart and kidney diseases in the advanced stages, those with defective vision beyond a certain degree and finally those afflicted with venereal infections. In our own experience this latter class runs about 2.5 per cent per year of all applicants examined. If, however, one considers that those who have infectious and contagious diseases, venereal diseases and the like, may again return for examination when free of their disqualifying defect, it will be seen that this Class may

*Presented at the meeting of the Paper and Pulp Section at the Thirteenth Annual Safety Congress of the National Safety Council, Louisville, Ky., Sept. 29-Oct. 3, 1924.

Dilts-

Give credit where credit is due

Stock cannot come over the machine any better than when it leaves the beaters



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contain potential employees and the percentage above given reduced at least 50 per cent.

Method of Making Examinations

In making the examinations the examiner and the prospective employee should be alone. The examiner should have before him the experience record of the employee. This will give him information as to the previous Industries in which the candidate has worked and advise him as to certain industrial diseases for which he should be particularly on the lookout. A complete examination can be made in from fifteen to twenty minutes in most cases. Re-examinations can be made in a shorter length of time. It is our practice to require all employees in Class C to return for periodic re-examination, the frequency depending upon the defect. All other employees are not required to return for examination but are encouraged to do so. We have been recommending at least one re-examination each year. The ideal procedure is to have a woman physician for the women employees and a male physician to examine the men. At the present our own examination of the women in our employ, outside of a careful examination of special faculties and the chest, is merely an inspection.

The Medical Department should issue clearance to all employees who have been absent from work because of sickness. This will do much to keep down the possibility of epidemics within the plant or in certain departments. If this can be done it means much to the other employees, to the Industry and the Community as can be readily seen.

In our organization we render medical service gratis to those who wish to accept the same. The service is offered. The employee accepts or leaves it as he or she sees fit. We find that more and more of our workers are coming in for Medical Service and advice. This advice does not always pertain to themselves but to their families as well. A well functioning Medical Department may be of excellent service to the Medical Profession in the Community in just this way. There is no occasion for any clashes such as are heard of between Medical Service in Industry and Medical Service in the Community.

Preventative medicine, a term so new as to be still unknown by many informed persons, should be a part of the duties of every well functioning Medical Department in the Paper Industry. We must recognize that we have certain processes which may lead to diseased conditions. These processes are such as mixing and making chemicals, sorting of paper and rags, cutting of rags, grinding, beating and shaking of rags and papers. Anything that can be done to make these processes safe—so far as life, limb and general comfort of the employees, should be carried out. Of this I shall have more to say later.

Education a Part of Program

A Medical Department or any other that does not have a plan of education in its program is only functioning about one-half. Teach by precept and by word. Organize classes if you can to instruct your men and women how best to take care of themselves and their health. Use bulletins carefully selected for use on your Bulletin Boards. Change them regularly. Have your employee thinking "Well today is Tuesday—we will have a new health bulletin". You can never tell how far this influence may carry. Our organization is in possession of a letter from the Health Commissioner of our city stating that he is certain that the Health Work carried on in our Mills has had an influence upon the entire community. Surgical Service usually has to do with such surgical attention as is required by those who have been injured while in the course of their employment. The Surgical and Medical services are conducted as a unit. Their location should be as central as possible and the establishment of first aid stations throughout departments are to be considered as unsatisfactory. What little time is gained by rendering service which often well intentioned but poorly rendered is entirely lost in subsequent developments in many cases. You know the service I mean: An uncorked Tr. of Iodine bottle, which is losing its alcohol by evaporation and concentrating the Iodine until the least you can expect is an Iodine burn when it is used; a swab to apply the Iodine which does duty until the stick is charred into two or falls to the floor; cotton with dust and blood stains upon it and a few bandages and some gauze. Early and competent diagnosis will have a pronounced influence upon the final results in the case. It should always be the one aim in this service to return the injured workman to Industry in as nearly a normal condition as possible.

More and even more are we appreciating that we have a duty to perform in reclaiming our Industrially maimed for Industry. There is known to most of us some who because of injury have been lost to Industry and who through some operative work, exercise or physical therapy might be remade into useful and contented employees. Much can be done along this line and unless the problem is openly met, Surgical Service in Industry is not fulfilling its obligations.

Dental Service as a part of Health Service should deal entirely with two phases of Dentistry—first, Dental Prophylaxis and second, Dental First Aid. But few organizations in the Paper Industry have full time Doctors of Dentistry. Most service of this kind is offered on a part time basis. The work of the Dentist is limited to prophylactic work, the cleaning of teeth and the rendering of first aid in cases of aching teeth. It is the practice to, if at all possible, clean the teeth of the employees at intervals of not more than six months and at that time to recommend such further treatment as may be required.

That this does bring direct returns to the organization offering the same may be appreciated when one reviews the ills that may come from infected teeth and poorly masticated food.

Nursing Part of the Work

Nursing Service as a branch of Health Service may be considered under two headings, the Intra-Mural Nurse and the Visiting Nurse. The Intra-Mural Nurse might be also designated as the First Aid Room Nurse. She is the right arm of the Plant Physician. Her duties are to assist in all first dressings, to make the subsequent dressings in the minor cases, to make and properly sterilize such dressings as are used in the work, to keep records and to assist in the educational work of the Department, by giving talks to the Female Employees at various times. I need not advise that the employing of any nurse to work in Industry is to be given more than passing consideration. Personally I consider a good nurse of the highest importance. The Industrial Nurse must have more than a good technical education and training. She must be democratic; that is she must be wllling to remember that she is a fellow worker—a neighbor and friend. She must be willing to work, not so much for Industry as in Industry. She must be able to understand that she is to work not so much for the worker or her employer as with and through them. She must understand something of Sociology and Economics. She must be sympathetic, not with a maudlin sympathy, but with understanding. She must be willing to listen to the gossip of the workers which often grows familiar, and so in this way understand the wishes of those with whom she is in contact. In this way she can be of real value to her employer and to her fellow workers.

The Visiting Nurse represents the Company in many cases to the employee's family and acts as the connecting link between the Health Service of Industry and the Home. She must be a woman with all of these attributes which I have named above. She is to be considered more of a Social Worker than as a Nurse. It is true that many large Industries do have their nurses do the actual nursing. However, the ideal way seems to be to turn over that phase of the work to the local nursing organization if there be one.

Visiting Nurse's Work

As the scope of the Visiting Nurse's work is so broad, it can only

(*Continued on page* 55)

Oil Tight! Water Proof!

The New Beloit Bearing, Through Ample, Scientific Lubrication, Reduces Power Consumption and Largely Eliminates Water Cooling on Press and Calender Boxes.

Beloit Iron Works **Beloit, Wis., U.S.A.**

Established Since 1858

On Nov. 4th, 1920, 26,000,000 people voted, BUT 27,000,000 did not. VOTE NOV. 4th. VOTE AS YOU PLEASE, but VOTE.

Editorial

Vol. LXXIX New York, October 2, 1924 No. 14
HENRY J. BERGER, Editor

A NOTABLE TALK ON HEALTH SERVICE

In this number is printed the address on "Health Service Work in Paper Mills," delivered by Louis H. Frechtling, M. D., at the meeting of the Paper and Pulp Section in connection with the Thirteenth Annual Safety Congress of the National Safety Council now in progress at Louisville.

Dr. Frechtling, who is a director of the Department of Industrial Relations, the Champion Coated Paper Company, is an authority on health service, and his address was so notably worth while that it is hoped every reader of the PAPER TRADE JOURNAL will take time to read it from beginning to end. While his talk was prepared especially with a view to application in the paper mills much of his logic may easily be adapted in other vocations.

Health service has reached the point where it is no longer looked upon as a fad, and yet there are too many who do not yet realize its importance or comprehend the necessity of promoting health in industry.

Good health does not alone concern the individual but indirectly touches all those with whom the individual comes in contact. Dr. Frechtling points this out. He declares that a man's physical fitness for his work should first be considered so that he shall not be given employment which will aggravate existing defects or cause new ones. His work should not be beyond his mental or physical power to accomplish.

Continuing, he shows how a man's health is of importance to others. He says:

"Those whom he will work with have a right to expect that the new employee be free of any infectious or contagious disease, which they might contract. They also have a right to expect that the new employee be physically fit to do the work expected of him lest a portion of it fall to the lot of those who are employed with him. The employer has a right to expect that the new employee will by physical and mental make-up be able to perform the task assigned to him and so remain a contented and safe worker at the work which he is to do. The customer who buys your product has a right to expect that the employee be capable of doing the work he is asked to do as it will be reflected in the product. Finally, society has a right to expect that the new employee be placed at work he is physically fit to do lest through accident or disease he be lost to his family and the care of those dependent upon him fall upon society."

And the speaker also calls attention to the fact that health does not merely imply health, but also embodies mental, moral and physical well being, and that health is therefore the very basis of efficiency.

The address also touches on the work of the visiting nurse, on sanitation, ventilation, drinking water, etc. The importance of each in its relation to health is dwelt upon briefly but in a most comprehensive way.

American industry is constantly giving more attention to health service, and it is one of the gratifying tendencies of the day. It is a far cry back to the days when the average employer gave scant thought to the health of his employees, and when many of them looked upon the employee as a factor in his business which could be replaced more easily than any other factor. The day has gone by when the employer gives less attention to his human machine than he does to the manufactured machine. The type of employer who gave all his thought to the latter and little or none to the former has practically passed out of existence.

If there are any who are still ignoring the importance of health service or giving scant attention to it, we hope that they will read Dr. Frechtling's address and be stimulated in their interest in the subject. Safety and health service in our factories have in recent years contributed materially to the progress of American industry. They have resulted in greater prosperity, in happier and more contented employees and have raised the standard of American products. Every step taken for the promotion of safety and health may be counted on to bring its reward, for both are efforts in behalf of humanity, and such efforts are never lost.

FOREST PRODUCTS CONFERENCE

The national conference called by Secretary Wallace in the utilization of forest products for November 19 and 20 in Washington will mark the most comprehensive attempt ever made in the United States to have the economical use of existing timber supplies take its essential place in the national forestry program along with the prevention of forest fires and the growing timber crops, declare officials of the Forest Service.

By better methods of manufacture and use the drain on the coutry's forests can be reduced at least one-fourth, Secretary Wallace states in his letter to 150 representatives of wood-using industries, consumers, the building crafts, and the general public who have been asked to name 2,000 men and women to whom invitations to attend the conference should be sent.

It is planned to have the two-day meeting attended by representatives of both wood-manufacturing and wood-consuming industries of the country. Newspapers, periodicals, railroads, builders, architects, foresters, forest schools and the general public will be represented. Secretary Wallace will issue his invitations to the conference as soon as possible after receiving the responses to the letters just mailed.

In his letter the Secretary said: "As you know, the question of timber supply is becoming more acute year by year. We are studying it from three angles; first, how to protect the timber we have from fire, insect pests and plant diseases; second, how to encourage the growing of more timber, both in national forests and private forests; third, how to cut down the waste in the manufacture and use of wood.

"We believe that by better ways of manufacture and use of the drain on our forests can be reduced by at least one-fourth. This problem has not received the attention it should have. We need more facts than we have as the basis for a workable program.

"After considering the whole matter carefully I have decided to call a national conference on wood wastes, to be held in Washington, November 19 and 20, in the hope that such a conference may be able to work out a plan of joint action by Federal, State and industrial

agencies. The responsibility is a joint one in which the public and the industries alike have a vital nterest.

"The thought is to invite representatives of all the associations and industries financially interested in the manufacture and the use of forest products, as well as the representatives of State forest organizations, the trade and general press and public interest and educational groups. I am hoping that you and several others will come from your own association, and I am asking if you will suggest the names of individuals who will take a live interest in the subject and to whom I can send personal invitations. I believe the purpose of the conference is sufficiently important to justify the time and expense consumed in attending it."

Paper Mill Wages and Employment

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., October 1, 1924.—August employment figures have just been made public by the Bureau of Labor Statistics, Department of Labor.

Two hundred and eight paper and pulp mills reported their employment in July at 52,200 decreasing in August less than one tenth per cent to 52,184. The payrolls in these plants on the other hand increased from $1,289,037 in July to $1,338,253 in August an increase of 3.8 per cent.

The Bureau received replies also from 140 paper box factories who gave their employment in July at 15,102 increasing in August to 15,590 an increase of 3.2 per cent. The payrolls in these plants also decreased from $307,631 in July to $322,900 in August an increase of 5 per cent.

Replies were also received by the Bureau from 135 paper and pulp mills who reported their employment in August of last year at 42,035 decreasing in the same month of this year to 40,935 a decrease 2.6 per cent. The payrolls in these mills decreased from $1,085,648 in August of last year to $1,055,861 in the same month of this yeat a decrease of 2.7 per cent.

One hundred and sixteen paper box factories gave their employment in August of last year at 12,852 decreasing in the same month of this year to 12,033 a decrease of 6.4 per cent. The payrolls in these plants also decreased from $259,132 in August of last year to $248,152 in the same month of this year a decrease of 4.2 per cent.

Newspaper Printed on Kraft

The first daily newspaper in this country to be printed on Kraft paper was issued on September 23 by the *Monroe News Star* of Monroe, La. The product used was that of the Brown Paper Mill Company of West Monroe, La., the grade being their Brown's No. 1 Kraft.

An interesting fact in connection with this issue was that forty-eight hours before the edition was off the press, the pine logs from the pulp of which the paper was made were piled in the mill yard.

Another interesting feature was the carbon used in making the printing ink was produced in the Monroe gas field belt, this section producing eighty per cent of the black carbon used.

To Build Paper Mill in Oregon

MANSFIELD, Ore., September 26, 1924.—The Alpin Paper Company has started assembling material for the construction of a new paper mill on the Coquille River, two miles south of Coquille, Ore., where water will be available. The tides raise the water in the Coquille River as far as Myrtle point, but there is no ocean water further than a mile south of the county seat.

The Company has raised over $100,000 in local subscriptions in Coos county and the remainder of $250,000 to $300,000 will be raised by bonding. Mr. Alpin is now in Portland buying the machinery from an eastern firm representative.

Bids and Awards for Government Paper

WASHINGTON, D. C., October 1, 1924.—The Government Printing Office has received the following bids for 15,680 lbs. railroad board 22 x 28—196, Dobler & Mudge 10.5 cents per pound; R. P. Andrews Paper Company 9.57 cents and 10.57 cents; Whitaker Paper Company 11.42 cents; Mathers Lamm Paper Company 10.47 cents and 8.29 cents; Reese & Reese 10.395 cents; Barton, Duer & Koch Paper Company 9.56 cents; Old Dominion Paper Company 9.17 cents; Lindemeyer and Harker 10.4 cents; Maurice O'Meara Company 10.95 cents.

Also on 4,000 pounds of kraft wrapping paper in 36 inch rolls, the Printing Office received bids as follows: Paper Mfgs. Company, Inc., 7.1 cents per pound; R. J. Terry Company 6.5 cents; Whitaker Paper Company 5.96 cents; Reese & Reese 6.485 cents; Old Dominion Paper Company 6.145 cents; D. S. Walton & Co., 6.125 cents; Barton, Duer & Koch Paper Company 6 cents per pound; Ringel Brothers 6 cents; Mathers Lamm Paper Company 5.7 cents; Samuel S. Alcorn 5.75 cents; R. A. Cauthorne Paper Corporation 5.55 cents; National Consumers Paper Corporation 6.73 cents; Manhattan Paper Company Inc. 6.75 cents.

The Government Printing Office also received bids on 3,000 lbs. of onion skin paper, 21 x 32—14½ No. 8 as follows: Barton, Duer & Koch Paper Company 27.47 cents per lb; Dobler & Mudge 27.68 cents; Whitaker Paper Company 24.75 cents; Reese & Reese 24.747 cents; American Writing Paper Company 29 cents; Old Dominion Paper Company 27.99 cents R. P. Andrews Paper Company 27.5 cents; Steiner Paper Corporation 36.21 cents; Lindemeyer & Harker 48.9 cents.

On 36,000 pounds of pink bristol board in 20 inch rolls, the bids were as follows: R. P. Andrews Paper Company 5.25 cents; R. A. Cauthorne Paper Company 6.4 cents; Lindemeyer & Harker 5.5 and 9.4 cents; Maurice O'Meara Company 5.49 cents; Mathers-Lamm Paper Company 5.75 and 5.25 and 5.2 cents; Barton, Duer & Koch Paper Company 5.23 cents; and Carter, Rice & Co. 5.02 cents; Old Dominion Paper Company 8.84 cents and Whitaker Paper Company 4.96 cents; American Writing Paper Company 5.55 cents; Reese & Reese 4.995 cents, and R. J. Terry Company 11 cents.

The R. P. Andrews Paper Company has been awarded the contract by the Bureau of Supplies and Accounts, Navy Department, for furnishing 8,500 reams of 16 x 21 white printing paper, at $19,-717.50. The Aetna Paper Company will furnish 10,000 reams of 8 x 10½ 4½ punched correspondence typewriter paper at $785. The Osborne Paper Company will turnish 10,000 reams of 8 x 10½ green punched typewriter correspondence paper at $5,100. Bids for these items were received on September 16.

The Government Printing Office will receive bids on October 3, for 404,000 pounds of mellon wood bristol board in 20 inch rolls. Bids will also be received on the same date for 6,500 pounds (1000 reams) of 24 x 32 65 double coated book paper.

The Government Printing office will receive bids on October 6, for 40,000 pounds (16,000 sheets) of 25 x 30, No. 20 No. 2 binders board. Bids will also be received at the same time for 2,600 pounds (100 reams) of 22 x 34, No. 13 blue sulphite writing paper.

The Government Printing Office will receive bids on October 6 for 23,750 pounds, (200 reams) of various sizes of map paper. Bids will also be received on the same date for 11,700 pounds, (300 reams) of 24 x 38 39 No. 16 white map paper.

Carey Suit for Reinstatement Dismissed

WATERTOWN, N. Y., September 29, 1924.—Supreme Court Justice Edward N. Smith has handed down his decision dismissing the complaint in the suit brought by Jeremiah T. Carey, former president of the International Brotherhood of Papermakers against the same organization, Matthew H. Parker and others seeking reinstatement as head of that organization. The temporary injunction was dissolved.

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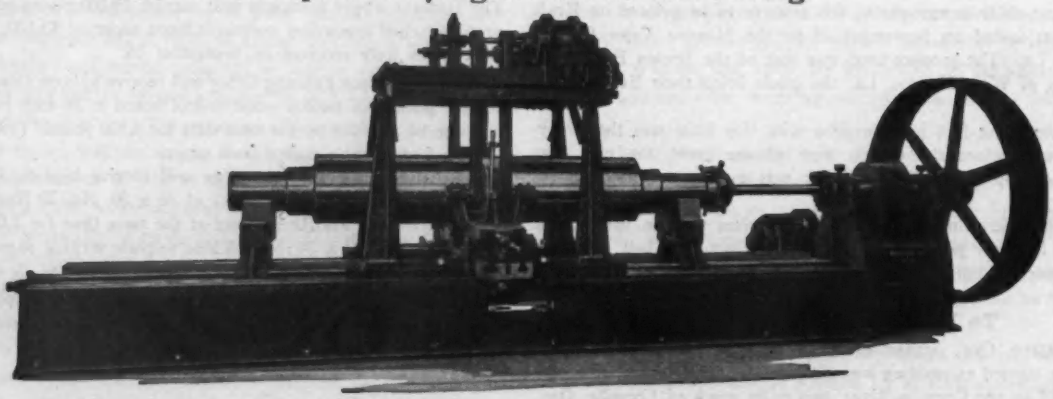

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

CHLORINE IN THE MANUFACTURE OF PAPER PULP

A Reading List. Contribution No. 44

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography, TAPPI.

Within recent years two processes have been proposed for the industrial application of the well-known laboratory method of Cross and Bevan in which cellulose is determined by the successive treatment of the raw material with chlorine and alkali; the ligneous material is chlorinated and the soluble "lignin chlorides" are extracted by the alkali. Cataldi has advocated the use of chlorine as a gas, while de Vains prefers the use of the hydrate ($Cl_2.8H_2O$). Because of the interest which these methods has aroused in this country, the following list of references has been compiled; it is believed to contain all of the important articles on the subject.

Cataldi, B.

Extracting cellulose from vegetable fibers.
Eng. pat. 101,475, Sept. 11, 1915; Can. pat. 226,002, Nov. 14, 1922; Span. pat. 7,507, Dec. 14, 1922; U. S. pat. 1,424,620, Aug. 1, 1922; Fr. pat. 492,222, Sept. 9, 1916; Ital. pat. 150,498, Oct. 11, 1915; 161,119, June 6, 97; 167,040, May 20, 1918; Nor. pat. 30,530, Oct. 3, 1916; Port. pat. 13,061, Dec. 11, 1922; Swiss pat. 77,516, Sept. 14, 1916; C. A. 11, 209.

Cerruti, A.

Industrial preparation of cellulose by the chlorine method.
Giorn. chim. ind. applicata 4, 64-65, 21-212 (1922); C. A. 16, 2599.

Clerc, J. F.

New process for the production of pulp.
Schweiz Tech.-Ztg. 20, No. 9 (1923); Papierfabr. 21, 201-203 (1923); C. A. 17, 2502.

Clerc, J. F.

The de Vains process in papermaking.
Paper Makers' Mo. J. 61, 328-331 (1923); Paper Maker 66, 315-317 (1923); World's Paper Trade Rev. 80, 492-496 (1923).

Clerc, J. F.

de Vains' process for paper from waste fibrous materials.
Chem. Met. Eng. 30, 259, 262-265 (Feb. 18, 1924); Paper Trade J. 78, No. 8, 43-47 (Feb. 21, 1924); Tech. Sect. 79, 48.

Dutt-hofer, Max, Kämpf, Adolf, and Schmidt, Erich.

Preparation of pulp by means of chlorine dioxide.
Ger. pat. 388,343. Papier-Ztg. 49, 110 (1924); Tech. Sect. 79, 48.

Fournier, Raymond.

Manufacture of straw pulp by means of chlorine.
Papier 25, 173-177 (1922); C. A. 16, 2779.

Fournier, Raymond.

The chlorine process for the manufacture of paper pulp.
Papier 25, 481-490 (1922); C. A. 17, 877.

Fournier, Raymond.

Chlorine, chlorine hydrate and waste waters.
Papeterie 45, 374, 378, 418-425 (1923); C. A. 17, 2643.

Fournier, Raymond.

Continuous chlorination by means of nascent chlorine.
Papeterie 46, 257-258 (1924); C. A. 18, 1569. *Also in* Pulp Paper Mag. Can. 22, 614-615 (1924).

Ginsberg, Ismar.

Chlorine in papermaking.
Chem. Age (N. Y.) 30, 487-488 (1922); Paper 31, No. 8, 10-11 (1922); C. A. 17, 634.

Heuser, Emil, and Mechan, Otto.

Comparison of the action of chlorine and of chlorine dioxide on wood.
Cellulosechemie 4, 101-109 (1923); C. A. 18, 1388.

Perdigiuer, A. L. de.

de Vains' process for the preparation and bleaching of paper pulp by means of chlorine.
Chimie et Industrie 7, 238-243 (1922); Paper Industry 4, 661-664 (1922); C. A. 16, 1864.

Perdigiuer, A. L. de.

The use of chlorine in the manufacture of paper pulp.
Papeterie 44, 866-873 (1922).

Perdigiuer, A. L. de.

Use of chlorine in the manufacture of cellulose.
Chimie et Industrie 10, 429-436 (1923); C. A. 18, 468.

Pomilio, Umberto.

Manufacture of paper pulp by means of chlorine.
Chimie et Industrie 6, 267-275 (1921); C. A. 15, 4050.
Also in Pulp Paper Mag. Can. 19, 1255; Paper 29, No. 10, 27-29.

Technical Section, Page 117

Pomilio, Umberto.
Manufacture of cellulose by the chlorine method. Its present and future development.
Giorn. chim. ind. applicata 3, 443-450 (1921); C. A. 16, 1864.

Pomilio, Umberto.
Industry of chlorine process—cellulose.
Giorn. chim. ind. applicata 4, 207-210 (1922); C. A. 16, 2599.

Pomilio, Umberto.
The manufacture of paper pulp by chlorine gas (Cataldi) process.
Chimie et Industrie 8, 41-45 (1922); C. A. 16, 3544.

Pomilio, Umberto.
National cellulose industry.
Atti congress naz. chim. pura applicata, 1923, 165-181; C. A. 18, 2246.

Pomilio, Umberto.
Chlorine pulp—chlorine gas and chlorine water processes.
Chimie et Industrie 11, 423-433 (1924); C. A. 18, 2075.

Rose,—.
The de Vains process.
Wochbl, Papierfabr. 55, 720-722, 990-991 (1924); C. A. 18, 2427.

Schacht, Willi.
Pulp manufacture by chlorination.
Papierfabr. 21, 521-526 (1923); C. A. 18, 584.

Schacht, Willi.
Manufacture of pulp by chlorination.
Papierfabr. 22, 121-123 (Mar. 23, 1924); C. A. 18, 2428.

Schwalbe, C. G.
The conversion of fibrous raw material to pulp and textile fibers.
Zellstoff u. Papier 3, 73-76 (1923); C. A. 17, 2502.

Strachan, James.
The de Vains process in detail.
Paper 33, No. 14, 5-7 (Jan. 24, 1924); C. A. 18, 1050.

Strachan, James.
More about the de Vains process.
Paper 33, No. 17, 12-13 (Aug. 14, 1924); C. A. 18, 1565; Tech. Sect. 79, 48.

Vains, A. R. de.
Production of chlorine pulp.
English pat. 189,561, Sept. 5, 1921; C. A. 17, 2504. Eng. pat, 197,329, Apr. 30, 1923; Tech. Sect. 79, 48. Eng. pat. 198,975, 201,488, Dec. 19, 1922; C. A. 18, 328. Eng pat. 208,551, Dec. 13, 1923; C. A. 18, 1571. Can. pat. 237,548, Feb. 5, 1924; Fr. pat. 556,183; C. A. 18, 1052.

Vains, A. R. de.
Manufacture of paper pulp in France and its colonies.
Papier 25, 337-347 (1922); Chimie et Industrie 8, 767-781 (1922); C. A. 17, 877.

Vains, A. R. de.
Continuous chlorination of pulp by means of chlorine.
Papeterie 46, 349 (1924); C. A. 18, 2247.

Waentig, P.
Technical utilization of chlorine for the digestion of plant fibers.
Papierfabr., Fest- u. Auslandheft, 1922, 67-71; C. A. 16, 2600.

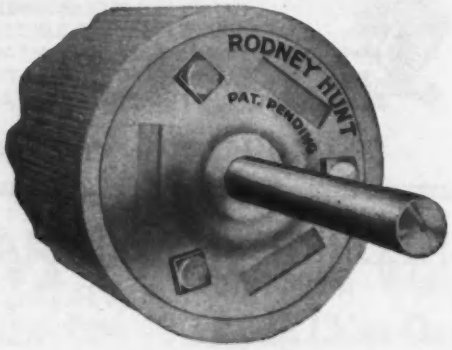
Waentig, P.
Manufacture of pulp by the chlorination method.
Papierfabr. 22, 45-46 (Feb. 10, 1924); Tech. Sect. 79, 48; C. A. 18, 1567.

Zuber, —.
Chemicak straw pulp.
Science et Industrie 7, No. 108, 80-81 (1923); C. A. 18, 903.

Rodney Hunt Metal Cap Felt Rolls

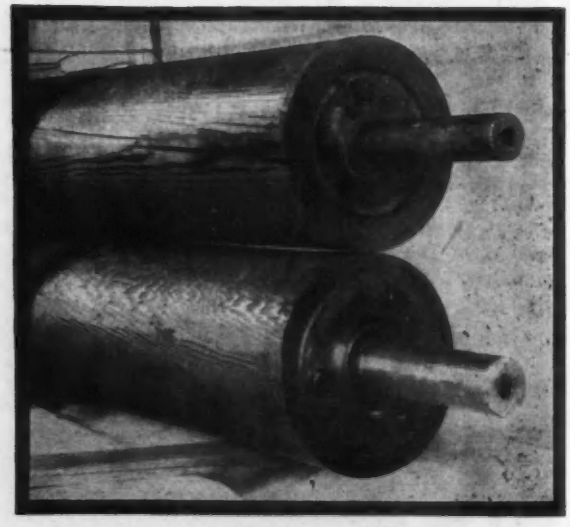
Small wood rolls, having moisture or alternating wet and dry conditions to contend with, are very susceptible to "checking." The condition is frequently aggravated by the methods used in building ordinary rolls, wherein the shaft anchorage is secured by the wedging effect of lag screws or wedges which have tendency to set up internal stresses.

In the Rodney Hunt "All Steel Cap" and "All Brass Cap" rolls



the end wood is protected from moisture and the expanding or splitting effect of shaft anchorage is overcome by forcing the metal cap into the end of the roll under heavy pressure and then wedging the shaft against the flange of the cap. In this way all the strain is borne by that portion of wood between the shaft and the inside of the metal flange.

The advantages of this method of construction over ordinary



methods are shown in the attached illustration which is reproduced from a recent issue of Roll Turnings the messenger of roll news published by the Rodney Runt Machine Company's Roll Department. Two rolls were made up from the same piece of stock, one being ordinary construction and the other an "All Steel Cap." The picture shows very plainly how the checks developed in the roll not strengthened with the metal cap.

Below is a list of uses to which the "All Steel Cap," and "All Brass Cap" rolls are especially adapted. Acid rolls, bleach tub rolls, cleated rolls, dye kettle rolls, feed rolls, felt rolls, guide rolls, pit rolls, spread rolls, squeeze rolls, tension rolls, whip rolls and wool scouring machine rolls.

SIZING WITH RUBBER LATEX*

By Carl Fenchel

Many articles on sizing with rubber latex have appeared in the trade journals during the past two years[1], which is the excuse the author offers for a further discussion and critical examination of this subject. [Fenchel then contrasts the propaganda accompanying this discovery with that (or rather the lack of it) accompanying Illig's discovery of rosin sizing.] The present work is treated under four main headings: Latex sizing as viewed by the discoverer, F. Kaye; its first reception and apparent results; critical considerations; practical results at the present time.

Discovery

Sizing with rubber latex is claimed to have been discovered by Frederick Kaye, of the College of Technology, Manchester, England. This claim is disputed by Doctor Fues of Hanau, who, in his article on "The use of rubber latex for the sizing of paper," which appeared in Der Papierfabrikant, No. 44, 1922, states that he investigated the use of rubber latex in 1911 and was discouraged from further experiments along this line by a letter from the Kamerun-Kautschuk-Compagnie, in which they quoted rubber latex in Germany at 4.20 marks per kilogram.

Mr. Kaye, in addition to his written articles in which the method and its advantages are discussed, has delivered lectures in a number of places; the lecture delivered in London, on Sept. 4, 1922, is used as the basis of the following discussion, and is quoted from Holztoffund Pappenzeitung (the same lecture appeared in The World's Paper Trade Review, 78, 745 (Sept. 8, 1922). In this lecture Mr. Kaye stated that during 1908-1911 he was engaged in British East Africa, Uganda, Mexico and the sub-tropical regions of South Africa in the investigation of the products from rubber-yielding trees. In 1917 he was invited to conduct researches on the problems connected with the manufacture of asbestos paper, millboards and asbestos-cement sheets—which gave him an insight into the interesting subject of papermaking. In 1918 he joined the Research Department in connection with the War Office, on airship fabrics at the College of Technology, Manchesteer, which gave him an opportunity for experiments on practical papermaking and the developments of his ideas.

Rubber latex is an excretion of the rubber tree, which comes from the vessels or small sacs residing in the cortical tissue between the outer bark and the wood. Kaye says that it forms a wonderful natural solution of rubber—with a 30 to 35 per cent content of actual rubber and at the same time is a perfectly limpid liquid, miscible with water in all proportions. At a dilution of 150 times, but better at a dilution of 600, the Brownian movement of the particles may be seen under the microscope. According to my observations the amplitude of vibration is inversely proportional to the size of the rubber particles. Those 0.5 to 1.0μ vibrate about 4 to 6μ, the larger (2 to 4μ) vibrate a distance corresponding about to their diameter. Rubber latex is therefore not a true solution but a very fine suspension, such as rosin milk containing only free rosin.

The rubber of commerce is coagulated by natural or chemical means. In this form the rubber is very hard and must be rendered flexible by passing through heated rolls. Rubber in the latex form, however, may be used directly in the paper industry. The increased cost in freight will, according to Kaye, be offset by the saving in the preparation of the size and by the improved properties of the paper. The best and most satisfactory method of preserving the rubber latex is the addition of ammonia. The use of 3 per cent of concentrated ammonia of commerce is sufficient.

The discoverer is very optimistic as regards the cost of rubber latex. Since a gallon costs 3.5 to 4.5 shillings (that is, an English pound of rubber costs 1 to 1.5 shillings), a paper containing 0.5 per cent of rubber would cost in latex 18 shilling per ton of paper made. In spite of the fact that in other places Kaye uses considerably larger amounts of rubber (thus in Zellstoff und Papier, 1924, p. 64-65, he states that a 0.5 per cent addition of latex increased the folding strength 20 per cent, a 3 per cent addition increased it 34 per cent) he is of the opinion that this method of sizing is not much dearer than sizing with rosin.

Method of Use

It is sufficient to dilute the latex 30 times (according to my experience a greater dilution is desirable, best results being obtained with a dilution of 100 times).

The precipitation of the rubber is best brought about by the addition of alum, as in rosin sizing. This addition is made shortly before the completion of the beating process.

Influence of Latex Upon the Paper

Kaye believes that the rubber latex has a pronounced effect upon the fibers in the hollander and upon the degree of hydration. Later in the above mentioned article Kaye speaks of the effect of latex in accelerating the rate of hydration. By this is probably meant slime formation.

In spite of the objections of Doctor Schidrowitz, Kaye believes that the addition of larger amounts of latex causes further improvement in the quality of the paper. This effect is noticeable after the addition of 0.1 per cent; it is first of all noticed in the increase of the strength properties, that is, the tensile strength, folding number and stretch, especially the last two. Further, the paper becomes more elastic, more water-repellent and less hygroscopic; it is somewhat yellowish but is readily dyed, etc. This favorable action may be exerted on all kinds of papers from the finest rag papers to the most inferior packing papers. The optimism of the discoverer goes so far that he calculates the world's paper production and speculates on the coming latex consumption.

"The application of rubber latex to papermaking will not only give a ready means of improving the quality of paper, but by cheapening paper production, it will open out many new fields for the use of paper and thereby the paper industry will greatly benefit by the process."

In another place he writes: "When every paper mill in Europe and the world has had the opportunity to experiment with, say, 500 gallons of rubber latex, then the rubber plantation outlook will take on the rosy hue of morn. Papermakers and the plantation industry will join forces and through Parliament, compel the greater regard to the protective packing of food in our country," in order to increase the consumption of the products of both industries.

The views of the discoverer are to be found in many other places. For example, in the India Rubber World he writes that a content of 0.1 per cent rubber gives a folding number of 5,000 to 6,000 and of 1 per cent, 72,500. The nature of the paper is not stated, but even if it had consisted of 100 per cent rag, the results were so favorable as to warrant the high price of rubber, provided they were permanent.

In the India Rubber World for June 1, 1922, he states that the hydration is decreased, which contradicts the above statements. No effect on color. The feel is improved. The time of beating may be decreased from 3.5 to 5 hours to 2 to 2.5 hours. The folding resistance is essentially increased (by this is probably meant the folding number).

*Translated (and in part abstracted) by Clarence J. West, chairman of the Committee on Abstracts and Bibliography, TAPPI, from *Der Papierfabrikant* 22, 313-317 (1924).

[1]See the bibliography on this subject by the translator, Paper Trade Journal 79, No. 7, 45-46 (Aug. 14, 1924).

Technical Section, Page 119

	Without Latex	With (amount not stated)
Cotton waste	220	1,300
Sisal hemp	100	8,000
Manila hemp	126	24,000
Jute waste	330	2,125
Flax waste	100	1,113
Bleached sulphite paper	65	600
Printing paper	2	250
Writing paper	20	1,060
Shelving paper	5	1,100

In addition to the phenomenal action on the strength, the paper is also made more water-repelling. The electric resistance and dielectric properties of paper may be improved. In some cases the paper is slightly darkened in color.

These and similar statements are frequently found in the trade literature. One additional quotation may be made from a recent report of Kaye (February of this year) concerning the use of rubber latex in the manufacture of boards, leather and linoleum substitutes. Here also there is a noticeable increase in the strength properties. Special mention should be made of the effect of vulcanizing agents (sodium sulphide). The addition of rubber latex increased the strength of a strawboard 34 per cent; the addition of 3 per cent sodium sulphide increased this to 46 per cent. The elongation in each case was increased 11 per cent. The tearing strength was also increased by vulcanization.

Experiments With Latex

These surprising results naturally interested a wide circle of paper makers and they desired to hear from other sources concerning the reliability of the reports on the action of latex size. That the experiments were not carried out on a commercial scale was due to the fact that large amounts of rubber latex could not be secured. Shortly after the first announcement of Kaye, the following experiments were carried out at the mill of the Firma Zanders under Doctor Klingner. The first experiment was carried out on only 50 cc. latex. The results of this experiment was about as follows:

1. Latex is a white "rubber milk," which is preserved by the addition of ammonia. Upon long standing there settles out a reddish yellow or dirty green precipitate which, because of its high density, is easily separated by decantation of the supernatant liquid. A film gradually forms on the surface of the liquid and if the container is opened frequently, this may form a stopper. The latex may be diluted with cold water. However, by using tap water a slight precipitate is formed, probably because of the magnesium salts present. Therefore dilution in the factory should be made with condenser water. A diluation of 1:30 is sufficient. The rubber latex is satisfactorily precipitated by aluminium sulphate, forming, after dilution, a fine to coarse flocculent precipitate.

2. Sizing experiments were carried out on a writing paper stock, beaten in a large hollander, of the following composition:

10 per cent bleached cotton
15 per cent bleached straw pulp
40 per cent bleached Mitscherlich pulp
35 per cent bleached Ritter-Kellner pulp.

Tests on this pulp were made as follows:

(a) Without sizing

(b) With 2, 4, and 6 per cent rubber (the latex contained 300 grams rubber)

(c) With 2, 4, and 6 per cent rosin.

The results are given in Table 1.

TABLE 1

Rubber, %	Gr./qm.	Sizing Quality	Folding Number	Rosin, %	Sizing Quality	Folding Number	Gr./qm.
2	79	1/2-3/4	27	2	1/2-3/4	5-6	73
4	75	3/4-1/1	90	4	1/1	6	74
6	75	1/1	189	6	1/1	9	75

The results indicate that latex is a good sizing agent and that the folding number is essentially increased, 4.5 times using 2 per cent rubber, 15 times using 4 per cent and 21 times using 6 per cent.

3. To confirm these results the experiment was repeated, using 6 per cent rosin and 6 per cent rubber and the control was also tested (this was not done in the first experiment because of lack of material). The results are summarized in Table 2.

TABLE 2

	6% Rosin	6% Rubber	Increase
Gr./qm.	72 g.	80 g.	.....
Ash	5.1%	4.8%	.....
Tearing strength, 1st dir.	2,960	4,248	.....
Tearing strength 2nd dir.	1,800	2,516	.....
Tearing strength average	2,400	3,412	1,012 or 42%
Extension, average	1.94	3.48	1.54 or 79%
Folding number, average	7	163	156 or 2,230%
Sizing quality	1/1	1/1	.....

These results definitely establish the increase in the physical properties of papers sized with rubber as compared with those sized with rosin.

4. Experiments in which rubber latex was used as a surface size gave negative results. The rubber appeared on the surface of the dipped (unsized) sheet. Complete sizing was not obtained and the folding number was not increased.

The complete results of these experiments may be summarized as follows:

Latex has a good sizing action. In practice 2 per cent (at the highest 3 per cent) rubber or 6 to 8 per cent rubber latex, based on the airdry weight of the fiber, is sufficient to produce complete sizing.

The physical properties of the papers are considerably increased, especially the folding number.

The use of latex in Europe is a question of cost. Rubber may cost three times as much as rosin and still be able to compete with it. Even a higher price might be paid in the case of certain papers, provided the effects are permanent.

It was decided that the answer could only be obtained by carrying out an experiment on a larger scale, which was done in December, 1922. The raw material for this experiment was a bank note stock, composed of 25 per cent bleached cotton and 75 per cent bleached wood pulp. The results are shown in Tables 3 and 4.

TABLE 3

Rubber %	Gr./qm.	Sizing Quality	Folding Number	Rosin, %	Sizing Quality	Folding Number
0	79	0	20	0	0	26
2	79	1/4	46	2	1/4	26
4	79	1/2	96	4	3/4-1/1	25
6	80	3/4-1/1	75*	6	1/1	15*
8	77	1/1	167	8	1/1	20
10	77	1/1	191	10	1/1	34

*Tested at 85-90% relative humidity, the others at 65%.

TABLE 4

	Rosin, 6%	Rubber, 6%	Increase
Gm./qm.	76	80	.....
Ash	4.3%	4.6%	.....
Tearing strength I	3,333m.	4,350m.	.....
Tearing strength II	2,304	3,045	.....
Tearing strength, average	2,817	3,700	883 or 31%
Elongation, average	2.42%	3.20%	0.18 or 32%
Folding number, average	15	75	60 or 400%

The results of this experiment also shows a considerable increase in strength properties, as compared with the standard, even if not to so great an extent as in the first experiments. The difference may be due in part to an error in the determination of the rubber content or to a difference in the quality of the latex, a different lot being used in the last experiment. In any event these experiments would have justified a large scale experiment had not the question of cost (of latex) intervened.

Of the other work relating to the testing of rubber latex sizing, only that from the Reichsfaserforschungsinstitut zu Delf, Netherlands, will be mentioned, since it appears to be the most complete study reported.

In their article in Der Papierfabrikant, 21, 425-429 (1923) experiments are reported in which papers containing 1, 2, 3 and 6 per cent rubber, 1, 2, 3 and 6 per cent rosin and 1, 2, 3 and 6 per cent of both were investigated. The results agree with those reported above in so far as a marked increase in folding number was observed. The sizing effect was found to be somewhat less than that with rosin. On the other hand the tearing strength,

elongation and hygroscopicity were not favorably influenced. A second series of experiments with 3 per cent rubber, 3 per cent rosin and 3 per cent of each confirmed the first series.

Their conclusions were as follows: The addition of latex to paper pulp has a marked effect on the properties of the paper that is made from this stock, even when the latex added is only 2 per cent. This influence is most marked upon the number of double foldings, on the tearing length and on the elongation at rupture.

These investigations were continued and reported by Dr. Jenny Beckering-Vinkers in Der Papierfabrikant 22, 129-132 (1924) (*see* Paper Trade Journal 79, No. 7, 43-46) (Aug. 14, 1924). These experiments were carried out with higher percentages of rubber, using 0, 5, 10, 15 and 20 per cent.

The results of these experiments again showed an increase of from 4 to 20 per cent in the folding number, but the tearing strength was decreased and the elongation showed only a slight increase. Specially remarkable was the increased water repelling character. As compared with rosin papers the papers with a high rubber content could not be dissolved by cooking with dilute sodium hydroxide. The rubber paper was yellowish, transparent and sticky to the touch. It is thought that latex may have a place in the preparation of waterproof papers and of leather and parchment substitutes.

Investigations carried out at the U. S. Bureau of Standards gave less satisfactory results. Even by the use of large amounts of rubber the strength properties were only slightly increased; however the paper seemed to be better sized and to take a better finish.

These apparent discrepancies in the results with latex sizing (which appear in other published work also), will be explained in the following paragraphs.

Critical Considerations

The critical evaluation of latex sizing is, in the first instance, determined by the question, which has been asked before in this article: is the increase in the strength properties permanent? This question has been studied during the last year in different places and it must be answered in the negative, at least as far as the present knowledge of latex sizing is concerned.

The occasion that led to this answer was not, in the first instance, the doubt as to the value of Kaye's process but the attempt to devise a method for analyzing the rubber content of the latex-sized paper.

While it is rather simple to determine the rubber in latex, it is much more difficult to determine it in paper, especially in the presence of rosin. Rubber in rubber latex is determined, according to Shaw and Bicking, by allowing 5 cc. (weighed) of the latex to flow into dilute acetic acid, the precipitate filtered on a weighed Gooch crucible and dried at 21° C.

Various methods have been employed for the detection of rubber in the presence of rosin. A. G. Rendall (Paper Maker 65, 59, Jan., 1923) has proposed the following: A weighed amount of the paper (about 200 cm²) is extracted with 50 cc. of chloroform one hour in the cold, then 15 minutes on the water-bath. The extract is concentrated to 2-3 cc. and then treated with warm acetic acid until, upon shaking, a turbidity results. The turbidity is due to the coagulated rubber, while the rosin remains in solution. This method may also be used for quantitative determinations.

Shaw and Carson analyzed paper by first extracting 48 hours with acetone, which removes the rosin, and then 48 hours with chloroform, which removes the rubber. Using this method they found that the chloroform extract began to decrease after a few days, while the acetone extract increased by a corresponding amount, which they believed to be due to a rapid oxidation of the rubber in the paper. They found that in sulphite and soda pulp paper the oxidation was quantitatively complete in about 12 days, while in rag papers the process required several months.

These observations have been confirmed by J. Beckering-Vinkers (*See* Paper Trade J. 79, No. 9, 47-49, Aug. 28, 1924.) In addition to this chemical phenomenon, which really does not interest the paper maker, is to be added a very noticeable decrease in the physical properties of the paper with time. Especially remarkable is the fact that the folding number of a paper containing 3 per cent rubber decreased from 204 to 15 in 145 days, that is a decrease of 93 per cent. To be sure, the control paper also showed a decrease of 53 per cent, due to very unsatisfactory storage of the paper.

The present papers were tested after 14 months, with the following results (Table 5).

TABLE 5

	Rosin, 6%			Latex, 6%		
	Tearing Strength	Elongation	Folding Number	Tearing Strength	Elongation	Folding Number
Dec. 19, 1922.....	2,400	1.94	7	3,412	3.48	163
Feb. 26, 1924.....	2,607	1.44	8	2,987	1.89	15
Change	No essential change			12% Decrease	46%	92%

These results show that the rosin sized paper retained its properties with practically no change, while the rubber sized paper had deteriorated considerably, especially as regards the folding number.

This very important fact, which is fully confirmed by other literature in American journals, together with the question of the cost of latex sizing, which is discussed in the next paragraphs, would seem to be the death blow of this discovery.

One gallon of latex costs 4 shillings (3.60 marks) and contains 1.5 kilograms of rubber; one kilogram of rubber, therefore, costs 2.40 marks, f. o. b. London. When it is remembered that it requires 50 per cent more rubber than rosin for sizing, it is necessary to use rubber to the value of 3.60 marks to produce the same sizing effect as that obtained with one kilogram of rosin.

One kilogram of good rosin costs 0.28 mark, f. o. b. Dresden. If we assume that the preparation of the rosin for use costs about 0.08 mark, then one kilogram of rosin ready for the hollander (in the form of rosin milk) will not cost more than 0.36 mark, or approx. one-tenth of the cost of the rubber. Prepared rosin size costs at the maximum $4; thus 100 kilograms costs $8 or 0.34 mark per kilogram.

From this one sees clearly that the cost of producing the higher physical properties of the paper, which are not permanent but lasts only for a few weeks, or in the case of rag paper, a few months, is very high.

If the sizing of paper with rubber is to have a practical importance, in spite of the cost, it will probably find its use in the field of special papers. The increased waterproofness of rubber sized papers, which to be sure was not found in my work, probably because the amount of added rubber was too small, suggests the favorable application of rubber sizing to this special class of papers. Further the slight hygroscopicity is important and may play a prominent role in such papers as cartridge paper, music roll paper and certain printing papers.

As a dielectric, rubber has a keen competitor in rosin. Experiment must prove whether the papers which are used in the electrical industry especially insulating papers, have their electrical properties favorably improved by the addition of rubber.

But, for the paper industry in general, it seems to me that rubber as a sizing agent is too costly.

The remaining possibility then is the use of regenerated rubber. Of the proposed methods for regenerating rubber, the acid and alkali methods are excluded at once, because they do not give suspensions. This leaves only the methods which employ solvents. But the solvents which may be used are also so costly that their use can scarcely be considered. It also appears improbable that one could obtain the extraordinarily fine degree of dispersion, such as is found in rubber latex of nature.

The final conclusion is, therefore, that the use of rubber as a substitute for rosin in the sizing of paper, except possibly in the case of certain special papers, is not justified.

TECHNICAL SECTION, PAGE 121

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

CLARENCE J. WEST, Chairman

Lignin

Chemistry of Lignin. I. Flax lignin and some derivatives. W. J. Powell and H. Whittaker. *J. Chem. Soc.* 125, 357-364 (1924). Flax lignin is obtained by digesting shives with 10% sodium at 130° under pressure and acidifying the alkaline extract. The washings from the lignin contain a substance resembling lignin, but having a much smaller methoxyl content. The yield of the lignin is 20 to 22% of the weight of the shives taken, and the product may be purified by pouring its solution in aqueous acetone into a large volume of dilute hydrochloric acid, a homogeneous, light brown solid being thus obtained. It forms an acetyl derivative which contains 5 acetyl and 4 methoxyl groups and which is insoluble in cold alkalis but readily hydrolyzed by boiling with water, indicating that the acidity of lignin is due to the presence of phenolic hydroxyl groups. Lignin is readily methylated to a trimethyl derivative but the latter cannot be acetylated. The presence of one aldehyde group in the lignin molecule is deducted from its reactions with Fehling's solution and phenylhydrazine and the formula for lignin may therefore be written $C_nH_{2n}O_8(OMe)_4(OH)_4CHO$. It forms a trinitro derivative which behaves as an aromatic nitro compound and reacts energetically with chlorine and bromine with liberation of halogen acid and formation of products containing 12 halogen atoms and only 2 methoxyl groups. Half of the halogen can be removed by boiling alkalis, the remainder being apparently attached to aromatic nuclei. The acetyl derivatives of the nitro and halogen compounds are readily hydrolyzed. Comparison of the results obtained with those of earlier investigators leads to the conclusion that the lignins from jute, flax and pine are not identical but that those from flax and winter rye straw are closely related.—C. J. W.

Acetylation of Lignin. Emil Teuser and Wilhelm Ackermann. *Cellulosechemie* 5, 13-21 (March 2, 1924.) An investigation is described in which an attempt is made to determine, by acetylation, the number of hydroxyl groups in wood lignin, prepared according to the method of Willstatter and Zechmeister. Five different procedures are used. Acetylation with acetic anhydride and pyridine, and with acetyl chloride gave the highest acetic acid values. The maximum acetic acid yield was 32.52%. Nitric acid and acetic anhydride gave the most rapid reaction and an acetic acid yield of 30.98%. After one hour at the boiling temperature a decomposition of the acetylated product began, and continued heating caused a noticeable increase in acetyl content, even over 42%. This is explained by a partial splitting of the methoxyl from the original acetylated product and a further reaction with the hydroxyl groups thus freed. Acetylation with acetic anhydride alone required a longer time than in the presence of pyridine. The addition of sodium acetate to acetic anhydride did not give good results. In the preparation of lignin a portion of the original methoxyl groups in the wood is split off, consequently the isolated lignin will have a higher hydroxyl content and corrections will have to be made. These corrections are very uncertain, but there is a good indication that three hydroxyl groups are present in lignin. The acetylated lignin products are colored, are insoluble in water and indifferent solvents, and yield acetic acid with dilute acids or bases.—J. L. P.

Quantitative Determination of Lignin in Wood Pulps. H. Wenzl. *Papierfabr.* 22, 101-106 (Mar. 16, 1924). The usual methods of estimating lignin in raw fibrous material are not applicable for determining residual lignin in wood pulps. In general the reagents are too drastic for the latter. When lignin is estimated directly by hydrolyzing the cellulose, either the residue contains pentosans and hexosans, or it is decomposed by the acid employed. The 72% sulphuric acid method is unsuitable as a control method owing to erroneous analyses and difficulty of filtration of the gelatinous lignin. The 41% hydrochloric acid procedure necessitates operation at a low temperature, which means cooling with ice in hot weather; consequently the method is impracticable for a works' laboratory. Some of the difficulties with the estimation are removed by the Krull modification, in which hydrogen chloride gas is passed into the moist fibrous material. The time consumed by a single determination is at least 48 hours which makes the test undesirable for control work. With pressure hydrolysis of the cellulose, according to Konig and Rump and Konig and Becker, there are experimental difficulties. The determination of the methyl number, according to Benedict and Bamberger, is very useful for lignin estimation but undesirable for daily use owing to the complicated apparatus required and the excessive cost of reagents. A new method is offered in which phosphorus pentoxide is added to concentrated hydrochloric acid. The reagent is prepared by adding 30 g. P_2O_5 to 100 cc. hydrochloric acid (spec. grav. 1.19), contained in a beaker immersed in cold water; no ice is necessary. 25 cc. of this reagent are added to 1 g. of air dry pulp, without previous extraction, and the mixture is stirred and stoppered. It is immersed in a water bath held at 30° C. for about an hour, when the cellulose is completely hydrolyzed. The reaction mixture is diluted with hydrochloric acid (spec. grav. 1.19), which has been previously heated to 30° C., and then filtered on a Gooch crucible containing an asbestos mat, which has been moistened with acid. The filtration is very rapid. The residue is washed first with hydrochloric acid, and then with hot water until acid-free. Dry at 110 to 115° C. The residue may be ashed in the same crucible. A complete determination can be carried out in 4 to 5 hours. The results agree closely with Krull's modified hydrochloric acid method.—J. L. P.

Raw Material—Wood

Manufacture of Pulp from Bordeaux Pine (*Pinus maritimus*). R. Michel-Jafford. *Papier* 26, 77-84; 197-202; 321-329; 571-575; 929-935; 1077-1080; 1187-1195 (Jan. to Oct., 1923); 27, 213-291 (Feb., 1924). A description of the botanical and chemical characteristics of *Pinus maritimus*, a detailed account of laboratory pulping tests by soda, sulphate and sulphite processes and of chlorination and bleaching tests of the resultant pulps, and a discussion of its possible use in paper making and of the production of by-products, especially from the standpoint of the French paper industry. Published data and patents on the treatment of pines in general for the production of pulp are reviewed. The high content and uneven distribution of the resin prevent its use for groundwood. Its use for brown pulp, with recovery of turpentine, is theoretically possible but was not investigated. Best results for soda pulp were obtained with 30% of caustic soda (on the dry weight of the wood) as a 6% liquor, taking 2 hr. to reach 7 kg. per sq. cm., and cooking indirectly for 6 hr. at maximum pressure. The yield was 35% of pulp which bleached to a creamy white with 5% of available chlorine, with negligible loss on bleaching. The unbleached pulp contains about 90% of cellulose; and a slight excess of chlorine easily degrades the alpha-cellulose. Best results for sulphate pulp were obtained with 23% of caustic soda and 7% of sodium sulphide (on the dry weight of the wood) as a 6% liquor, taking 1.5 hr. to reach 7 kg. per sq. cm., and cooking indirectly 4.5 hr. at maximum pressure. The consumption of alkali was 16% (calculated as caustic soda) and the yield 39% of pulp which bleached to a creamy white with a little

TECHNICAL SECTION, PAGE 122

less than 5% of available chlorine. The unbleached pulp contained 92% of cellulose, and the bleached pulp 82.7% of alpha-cellulose. Semi-commercial direct cooks for soda kraft pulp carried out under unfavorable conditions (pressure could not be raised above 4.5 kg. per sq. cm.) gave a bleachable pulp suitable for wrappings by cooking 15 hr. at 4 kg. per sq. cm. with 20% of caustic soda (on the dry weight of the wood). Laboratory scale indirect cooks for soda kraft gave a 52.7% yield by cooking 3 hr. at 7 kg. per sq. cm. with 20% of caustic soda. Beating 1 hr. with a stone roll gave a maximum breaking length of 5,200 m., comparable with that of strong sulphite. Sulphate kraft tests showed *P. maritimus* can give pulps equal to the best Swedish krafts. Maximum strength was obtained by using 15% of caustic soda and 7.5% of sodium sulphide (as liquor of 3.4% and 1.7% concentration, respectively) bringing up to 6.3 kilos per sq. cm. in 1.5 hr., cooking at maximum pressure for 1.5 hr., and brushing for 2 hr. with bronze tackle. The yield was 47%. Chlorination of kraft with chlorine water, followed by washing with caustic soda and bleaching with bleaching powder, gave a whiter pulp with lower consumption of chemicals than ordinary bleaching of sulphate or soda pulp; the alpha-cellulose content is decreased, but the strength is well maintained. Use of waste liquor for dissolving the chlorination compounds, if practical, would decrease the consumption of chemicals required for bleaching. Sulphite cooks indicated that drastic treatment (20 hr. at 5 kilos per sq. cm.) is required to cook the heartwood; ordinary treatment for spruce cooked only the sapwood. Treatment with caustic soda prior to sulphite cooking gave very poor results, presumably because the caustic soda acted on the wood in such a way as to prevent penetration by the sulphite liquor; treatment with less soda (0.4 instead of 2 and 8% on the weight of the dry wood) would probably give good results. The various uses to which the different grades of pulp could be put, and the extraction, recovery and use of the resin are discussed. Most of the tests were carried out on wood from untapped trees. Tapped trees would give lower yields and higher consumption of chemicals owing to higher content of resin, which accumulates chiefly in the neighborhood of the tap holes.—A. P.-C.

Control of Decay and Molding of Groundwood. C. Audrey Richards. *Paper Trade J.* 88, No. 18, 55-60 (May 1, 1924). Deterioration of groundwood by molds and fungi is described. It can be prevented with relative ease by appropriate preservative treatment. Of 106 chemicals tested, sodium fluoride (48 lb. per ton of pulp) gave best results, with borax (80 lb. per ton) a close second, and boric acid (80 lb. per ton) practically equal to borax but much more expensive. Sodium dinitrophenolate (2 lb. per ton) was as effective as anything tried, but caused a yellowish discoloration which washed out but left the pulp browner than normal. The amounts can vary according to the length of time the pulp is to be stored. The following are recommended: 16 lb. of sodium fluoride; or a mixture of cymene (sulphite turpentine) and naphthalene, with or without addition of beta-naphthol or of dichlorobenzine, emulsified in rosin size milk. The preservative is applied by spraying or dripping on the pulp as it is being formed on the wet machine after as much of the excess water as possible has been removed from the pulp. An inexpensive apparatus for this is described. The cost of treatment is estimated at $0.70 to $1.90 per ton.—A. P.-C.

Utilization of Decayed Wood in the Chemical Pulpmaking Processes. John D. Rue, R. N. Miller, and C. J. Humphreys. *Paper Trade J.* 88, No. 20, 44-48 (May 15, 1924). Earlier work done by the U. S. Forest Products Laboratory is briefly reviewed. The effects of various types of rots on pulping value of the wood by the sulphite process were studied on rotted woods freed from all sound wood. Balsam wood infected with *Fomes pinicola* in both early and advanced stages showed decided decrease in yield per unit weight and in density, giving very low yields per unit volume. Balsam infected with mixed feather rots showed only a small reduction in yield per unit weight even in the advanced stage, but loss of density causes appreciable reduction in yield per unit volume. Spruce infected with *Trametes pini* give higher yields per unit weight in the more advanced stage; but lower density brings the yield per unit volume slightly below that from sound wood. Analytical data is given for all the samples pulped. Strength tests on the pulps obtained showed the pulp from wood decayed to an advanced stage by *Fomes pinicola* to be too weak to be of any value; but all the others were commercially useable. All the pulps showed the expected lowering of color. The results are discussed from the standpoint of culling in the woods the wood that is of no commercial value, and retaining partially decayed wood which can profitably be pulped.—A. P.-C.

Pulpwood Prices and the German Paper Industry. L. P. Zhereboff. *Bum. Prom.* (Russia) 2, No. 5, 495-506 (Sept.-Oct., 1923). Figures are presented showing that since 1900 the growth of the German paper industry as well as German paper prices were dependent upon the amount and prices of pulpwood exported from other countries. From 1907 to 1913 Russia's export of pulpwood to Germany was rapidly increasing. In 1922 the largest amounts of pulpwood imported to Germany came from Czecho-Slovakia, Poland and the Baltic countries. These sources of supply are only temporary. Russia's timberlands are comparatively inexhaustible and by regulating the export of pulpwood she will be able to control the development of the paper industry in other countries in favor of her own paper industry.—M. L. C.

Forest Concessions in Russia. L. P. Zhereboff. *Bum. Prom.* (Russia) 2, No. 4, 342-364 (July-Aug., 1923). A statistical study to show that Russia has the world's future supply of timber. A scientific program of foreign concessions is advocated. A map of concession districts is appended.—M. L. C.

Weight of Wood and Quantity of Pulp. Rudolph Sieber. *Svensk Pappers-Tid.* 26, Nos. 15 and 17 (1923); *Paper* 33, No. 21, 7-10 (March 13, 1924). A discussion of the relation between density, volume and moisture content of wood, and the effect of moisture on the yield of pulp.—A. P.-C.

Papers from Kenya Bamboo. R. St. Barbe Baker. *Paper Making* 43, 289-291 (May, 1924). A discussion of the suitability of Kenya bamboo especially from the economic standpoint and the standpoint of extent of supplies and estimated yield.—A. P.-C.

Method of and Apparatus for Producing Celluloses from Bamboo. W. A. R. M. MacRae. Eng. pats. 213,003 and 213,004. —*No. 213,003.* In order to improve the quality of the cellulose the non-fibrous portion of the bamboo or other vegetable fiber is extracted before digestion by washing and mechanically beating the fibers. During the washing process the non-fibrous matter is precipitated and removed so that the useful constituents which it contains may be collected. *No. 213,004* provides an apparatus for carrying out the process. It consists essentially in a beater with washing drum equipped with a suitable grid in the bottom of the trough, through which the pith and other similar material can be removed, means being provided for drawing off this material without causing any suction effect which would tend to draw off some of the good fiber.—A. P.-C.

Manufacture of Paper Pulp from Peat. Plauson's (Parent Co.), Ltd. Eng. pat. 207,337. The peat is disintegrated and boiled, either in open boilers or under pressure, with milk of lime together with a soluble sulphate, sulphite or carbonate, or other compound which reacts with lime to give caustic alkali. The resultant pulp, after bleaching, is claimed to be suitable for cardboard, coarse paper, or printing paper, according to the severity of the boiling operation. —A. P.-C.

Raw Materials—Chemicals

Raw Materials Used in Paper Making. J. Crolard and R. Boney *Mon. Papeterie Francaise* 54, 564-567 (Dec., 1923); 55, 14-16 (Jan. 1, 1924); 35-36 (Jan. 15, 1924). Brief description of the composition, state in which they are usually marketed, and qualities for use in paper making, of the various chemicals used for digesting, bleaching, sizing and loading.—A. P.-C.

Non-Metallic Minerals and Chemicals Used in the Pulp and

TECHNICAL SECTION, PAGE 123

Paper Industry. L. Heber Cole. *Pulp & Paper,* International No. 115-125 (Jan., 1924). An outline of the sources and processes of manufacture of sandstone, clays, soapstones, silica sand, basalt lava, asbestos, coal, cements, sulphur and sulphur compounds, limestone, sodium salts, chlorine bleaching compounds, fillers and coating materials, and coloring materials, with indications as to the possibilities of their being produced in commercial quantities in Canada. —A. P.-C.

Sulphite Process

Sulphur or Pyrites? Rudolf Sieber. Papierfabr. 22, 89-95 (March 9, 1924). In the use of pyrites, averaging 40 to 50% S., as a source of sulphur for the preparation of cooking acid losses of 8.9 to 11.7% sulphur were observed. When sulphur was employed, which contained only 0.5% ash and water, the total loss was 1.1%, and there was much less SO_3 formation.—J. L. P.

Effect of Sublimed Sulphur in the Cooking Acid on Pulp. O. Hiller. *Bum. Prom.* (Russia) 3, No. 2, 68-69 (Feb., 1924). Sublimed sulphur which accidentally got into the sulphite cooking acid was found to act similarly to selenium, but not as strongly. Above 135° C. the liquors darkened and the SO_2 content decreased, resulting in a hard, dirty-yellowish pulp.—M. L. C.

New Apparatus for the Preparation of Bisulphite Solutions. O. Hiller. *Bum. Prom.* (Russia) 2, No. 6, 625-633 (Nov. and Dec., 1923). To overcome the difficulties encountered when the common methods are used for the preparation of bisulphite solutions a new apparatus was developed at the Sokol mill. Its advantages over the Mitscherlich or the Jenssen towers are: easier absorption of gas, complete mixing of gas and liquid, impossibility of settling out of solid products of the reactions; agitation without auxiliary apparatus; accessibility for cleaning; flexibility to suit requirements. The new tower is described in detail and sketches are given.—M. L. C.

Preparation of Sulphite Liquor. H. T. Tenen. *Paper Ind.* 6, 89-94 (Apr., 1924). Description of the tower system.—A. P.-C.

Chemistry of the Sulphite Process. VI. Relative Effects of Temperature and of Acid Concentration During the Cooking. R. N. Miller and W. H. Swanson. *Paper Trade J.* 78, No. 15, 178-181 (Apr. 10, 1924). Temperature has greater influence on the progress of the reaction than has acid concentration. Changes in temperature that are commercially possible are of greater influence than any acid concentration changes within the ordinary range of commercial practice. In the usual process of cooking the relations between pressure, temperature and acid concentration are largely offset by pressure and temperature limitations, so that temperature is left as the dominant factor in controlling the progress of the reaction. The lowest average temperature that will give the requisite purification in the necessary length of cook will produce the best quality of pulp. —A. P.-C.

Cooking of Sulphite Cellulose. G. P. Genberg. *Paper Trade J.* 78, No. 15, 160-168 (Apr. 10, 1924); *Paper Ind.* 6, 345-357 (May, 1924). The procedure followed in a typical Swedish mill producing Mitscherlich pulp, a Finnish mill producing Ritter-Kellner pulp and an American mill producing strong quick cook pulp for news print, is described. The three methods are discussed in the light of a large amount of data regarding actual performances of numerous Swedish, Finnish and American mills, which are given in 15 tables. The quick cook method gives the same yield per digester space of strong pulp as, and a higher yield of easy bleaching pulp, than the Ritter-Kellner. Spruce alone gives higher yields of strong and of easy bleaching pulps than mixed spruce and fir, or than hemlock. The Mitscherlich process does not give a higher yield than the direct cooking methods, when cooking to the same degree of digestion in both cases. In the case of strong pulp the production efficiency is 14% higher for Ritter-Kellner spruce, 78% higher for quick cook hemlock, and 100% higher for quick cook spruce than for Mitscherlich spruce. In the case of easy bleaching pulp the production efficiency is 16% higher for Ritter-Kellner spruce, 68% higher for quick cook hemlock and 114% higher for quick cook spruce than for Mitscherlich spruce. The yield of strong pulp per cord of unbarked spruce is higher in American quick cook mills than in the Mitscherlich and Ritter-Kellner mills of Sweden and Finland. Easy bleaching pulp gives a 7% lower yield than strong pulp. Sulphur consumption is highest in the quick cook, lowest in the Mitscherlich process, and 11% higher in the production of easy bleaching than in that of strong pulp. Steam consumption is higher in direct than in indirect cooking, and increases as the yield decreases.—A. P.-C.

Decker Process for Cooking Pulp. Rudolf Sieber. *Wochbl. Papierfabr.* 55, 332-335 (Feb. 16, 1924). The Decker process of pulp manufacture is critically discussed. An investigation of the composition of the pulps so produced is needed for drawing a fair comparison. The bleach number does not indicate an easy bleaching stock. Increase in pulp yield is only possible by reducing the solubility of the cellulose and other carbohydrates, the pentosans and the hexosans, in the cooking acid. Power economy is dscussed with reference to the new process.—J. L. P.

Strainer for Sulphite Digester Reliefs. C. H. Allen, assignor to Great Northern Paper Company. U. S. pat. 1,487,044, March 18, 1924. In the neck of the digester is a collar of acid resisting metal, e. g., bronze, through which is threaded the relief pipe. Inside the collar, and of slightly smaller diameter, is an acid-resisting screen, e.g., of lead, with a ring shaped flange at both top and bottom serving the double purpose of reinforcing the ends of the screen and of preventing the chips from passing between the screen and collar. The screen being generally of a relatively soft material (lead) is reinforced by means of studs projecting from its outer surface and coming in contact with the bronze collar. One of the advantages of this strainer is that the digester can be charged without removing it.—A. P.-C.

Indirect Heating of Digesters. Torsten Samson. *Svensk Papp.-Tid.,* Feb. 29, 1924; *Paper* 34, No. 2, 41 (May 2, 1924) Brief outline of various methods of indirect heating, bringing out more particularly the effects of the resultant improvement in the circulation of the liquor.—A. P.-C.

Heat Problems in a Sulphite Mill. A. H. Lundberg. *Paper Trade J.* 78, No. 22, 41-45 (May 29, 1924). A discussion of actual steam consumption for cooking, bleaching and drying and of the possibilities of saving. The usual steam consumption at present is about 14,000 to 17,000 lb. per ton of air dry pulp; and it should be possible to reduce this to about 8,000 lb., of which about 4,000 lb. could be obtained from sulphite waste liquor fuel and a large proportion, if not all, of the remainder from the combustion of wood room waste.—A. P.-C.

Some Sulphite Mill Calculations. W. B. Van Arsdel. *Paper* 33, No. 20, 12-13, 27 (March 6, 1924). A collection of formulas and graphs useful in designing apparatus or in calculating results of tests, comprising: reduction of gas volumes to standard temperature and pressure, relation between partial pressure and percentage by volume, percentage loss or removal of a constituent, relation between percentages by volume and by weight, volume changes due to water vapor, and specific volume of sulphur dioxide.—A. P.-C.

Acidproof Rapid-Setting Cement. N. Takata. Can. pat. 237,041, Jan. 15, 1924. A mixture of white clay 60 parts, lime 10 parts, asbestos 3 parts and borax 6 parts, is heated and after cooling is powdered and mixed with 10 parts of litharge powder. This cement is particularly suited for use in lining sulphite digesters.—A. P.-C.

Regenerative Production of Pulp. L. Bradley and E. P. McKeefe. Can. pat. 236,532, Dec. 25, 1923. Residual liquors from the production of pulp with a liquor containing sodium sulphite or sodium sulphite and sodium hydroxide, is subjected to the action of sulphur dioxide and, if desirable, of sodium bisulphite to regenerate the sodium sulphite. The precipitated organic matter is removed and a portion of the liquor may be causticized to provide the desired proportion of sodium hydroxide.—A. P.-C.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

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Conducted by THOS. J. BURKE, C.A., Sec-Treas

IMPORTANCE OF ACCOUNTING TO MANAGEMENT*

By A. R. Erskine

While we can look back to the ancients for the beginnings of accounting, it was not until recent times that modern accounting as we know it was devised. Until the advent of the machinery age, transactions of buying and selling and exchange of money were adequately served by the simplest of systems. When big factories with mechanical appliances, employing numerous men, began displacing hand work, the industrial era started, and accounting became complex. The rapid multiplication of such industries increased the problem, and it soon became apparent that manufacturing accounting was the most difficult task that had yet faced the accounting fraternity. The subject was most baffling. The old merchandise account was continued, to which goods made or purchased were charged at cost, and sales were credited at selling prices. Costs of product were estimated by crude methods, and inventories were priced at these costs. Inventory periods were dreaded because of the difficulties of pricing, closing down and making up balance-sheets and trading accounts. Balance-sheets and profit-and-loss statements in the comprehensive and intelligent form of the present day were unknown. Audited and certified statements such as are now commonly required were likewise unknown; and it is safe to say, perhaps, that statements really correct were seldom obtained. Manufacturers naturally sought men skilled in accounting practice to help them out, and while such men knew more than the bookkeepers employed by the manufacturers, they had only a scant knowledge of modern accounting as we know it today. These accountants, however, enjoyed a lucrative practice, formed a profession and studied hard.

First Recognition in England

As the first great modern industrial country, it was natural that England should first appreciate the importance of accounting and dignify men engaged in it publicly by state recognition. England has the distinction of first creating by law the chartered accountant, about two generations ago, and of establishing accounting on a high professional plane approaching that of law. Professional accountants were meantime practicing in the United States, and in 1896 they succeeded in having the legislature of the "Empire State" pass a law recognizing the profession, under which the board of regents examines applicants and grants C. P. A. certificates to successful candidates. All our forty-eight states now have C. P. A. laws. All examinations include commercial law subjects as well as accounting.

It was about 1896 that our big industries began forming, and the certified public accountants of the country have performed highly efficient and comprehensive work in the installation of the new systems, improvement of existing systems, standardization of balance-sheets, profit-and-loss statements, auditing methods, etc. Big business could not have prospered as it has without the aid of these men, and it cannot get along without them today. Our federal government has used them in the formation of laws and accounting systems with the Interstate Commerce Commission, the Internal Revenue Department and many others. They have performed invaluable services for our railroads, mercantile and financial institutions and thousands of income-tax payers depend upon them to make out their returns. Bankers, stockholders and investors demand their certification of corporation balance-sheets, profit-and-loss statements and prospectuses.

In defining the word "profession," Webster says: "The three professions, or learned professions, are especially theology, law and medicine." He includes neither chemistry, engineering nor accounting, which are so important to the conduct of business. Theology and medicine give their greatest expression outside of business and in our home life, but law, chemistry, engineering and accounting subsist on business and are a part of it. Professional accountants play their part, as has been said, but vocational accountants employed by industry are responsible for results in individual institutions.

Should Be Expert Accountant

The comptroller or general auditor of a corporation should be an expert acountant. He should know the theory and practice of general accounting as well as the professional accountant and infinitely more about the problems of his own concern. He is the diagnostician of the business. His bump of curiosity is of abnormal development, and he takes nothing for granted. He knows what is going on. He is resourceful, courageous, aggressive and determined to get the facts and disclose them to the management. Although he is a bold man, he must be tactful in order to keep the friendship and get the co-operation of the organization. No man is stronger than the organization, and tactful men realize this. The best comptroller is one who calls the attention of the management orally, or by special letter, when it fails to act in a dangerous situation.

The treasurer of a big corporation should be an expert accountant and have the courage of a lion. The real treasurer, as I comprehend him, is the man unafraid, when danger threatens, to say "no" to his president or his directors when occasion demands and to show him or them why. He should be prepared to accept dismissal rather than to permit grave risks to be taken. If the treasurers of all the corporations of America during 1919 and 1920 had been this

* An address before the Illinois Manufacturers' Association, Chicago, 1924.

type of man, most of the inflation and huge losses of business would have been avoided. We all know of several presidents who ran their corporations in debt during this period without realizing the significance of their actions at the time. This fact is one of the best evidences of the importance of accounting to management.

The Secret of Success

The responsibility rests on the comptroller in co-operation with the treasurer of every corporation for the character of its accounting system, for therein lies the secret of success. Some systems are almost choked to death with red tape. They anger the production and sales departments, puzzle the accounting forces, cost a barrel of money and are Greek to the management. Capable comptrollers will not permit such systems to endure. To be of real value, accounting systems must be comprehensive, simple and economical. They must not clutter up the factory with time tickets, material tickets and other minutiæ. Departmental records must be kept only as the basis for operating reports that are actually required by the management. When the cost of keeping records and making reports exceeds the loss that might be sustained without them, they become inadvisable.

Accounting in Big Business

Big business generally is equipped with efficient accounting systems which comprise, in brief: (1) original records kept in different departments showing receipt and disbursement of money; purchasing, stocking and use of materials and supplies for production, construction and equipment; the movement of finished goods; and collection and payment of accounts; (2) operating reports made from these records for the information of the management; and (3) financial reports for the information of management, directors and stockholders. These reports, made daily, weekly and monthly, show what has happened in the business. Unless management thoroughly understands them, however, and uses them to correct wrong conditions and take further advantage of opportunities which they disclose, their value is diminished. The management should possess at least a good working knowledge of accounting. The possession of even brilliant talent for manufacturing or selling or both is not enough. There are many details of big business which management must watch vigilantly. Plant equipment and methods of manufacture may be economical and proper or otherwise. The number of employees, salary and wage-rolls, kinds and cost of materials, costs and prices of product, markets and sales efforts, financial condition and profits, are always live questions. Reports from the accounting department disclose the facts concerning them all. Every member of the management from the foreman up to the president should be an analyzer of reports and a seeker after improvements. These things illustrate the importance of accounting to management. They show why it is impossible to conduct a business intelligently and successfully without an adequate accounting system. While such systems generally prevail in big corporations, many smaller concerns are wofully lacking in accounting facilities. Such concerns will bond their cashier to prevent him from stealing the cash in the bank or the cash drawer, and maintain no checks whatever on their inventories or receivables, which usually represent three-fourths or more of their total assets. On the theory that a dollar saved is a dollar made, they spend money reluctantly. They think only of accounts and never in percentages. When sales can be increased by an increase in the amount of expenses without increasing the expense ratio, they seldom grasp the opportunity. When new machinery or new methods will justify the scrapping of old equipment, they never comprehend it. Modern accounting methods are adaptable to such concerns, whether they be engaged in manufacturing, jobbing or retailing, and will pay their cost if operating reports are properly utilized by the management. It is my conviction that efficient accounting systems applied to business generally in the United States and used intelligently by management would save scores of millions of dollars annually.

In conclusion, I would like to make brief reference to the present state of business. Our production, transportation and distribution activities are the source of our wealth, employment, wages and happiness. I always like to define business as "organized society working to produce and distribute the things it needs." If this definition be accepted, then obviously any interference with society in its activity is an injury to everybody in the country. It is awfully easy to disturb business by undermining confidence. When this is done, unemployment ensues, with the misery it entails. The country has been flooded with bearish propaganda deliberately intended to undermine confidence, frighten security holders and hurt the business of the country. It was and is distinctly and deliberately hostile to the business of the country, to the prosperity of the nation and to the happiness of our people. A prominent financial magazine has described the cumulative effect of bear raids on the stock market. It says:

"As pressure is put upon the stock market, there is less optimism, then more pessimism, then loss of confidence, decreased buying power, reduction of gross business with consequent increase in overhead, which means lower net earnings. These factors in turn frequently force reduction in dividends, and this has an even more depressing effect upon stock prices. It is a vicious process. Short selling does not destroy confidence, but raiding the market does, particularly when it is accomplished by propaganda originated by and intended to aid bear operators. The bear may claim that it is just as illegitimate to boost stocks unduly, but a creation of artificial values on the bull side does not have such a detrimental effect in the way of injury to business and creation of unemployment."

What Big Business Has Done

Business is frequently assailed and sometimes penalized because it is big, whereas the truth is that our big industries are the very ones that have made our country what it is. Big business is the difference between the United States and the rest of the world. America was not industrially great with its small industries of thirty years ago. I remember when industrial workers were making from ten to twenty cents an hour, when a few owned their homes, and men who owned bicycles were considered fortunate. Big business has made it possible for workers to own modern homes, automobiles, talking machines and radios. Big business has made necessities out of luxuries by mass production, which put them within the reach of the average man. Big business has advanced the living standard of America to a high level hitherto unknown in history. It has converted America into the world's greatest industrial nation and made our big cities what they are. All great modern nations have been industrial nations, and industry is the life blood of this nation. Big business, lawfully conducted, is the greatest asset of the nation. Every governmental agency and the power of the people should always be exerted towards its maintenance and prosperity.

Instructions in Paper Making

The Joint Vocational Education Committee of the Pulp and Paper Industry of the United States and Canada has just issued a very interesting pamphlet on the facilities for correspondence and class instruction on the manufacture of pulp and paper available in the United States and Canada.

The pamphlet gives complete information together with the cost of the correspondence courses offered by the University of Wisconsin, the Institute of Industrial and Domestic Arts and the Massachusetts Extension courses, and mentions briefly the college courses available. The contents also are mentioned of volumes I to IV, which have already been issued, and of volume V which is to appear shortly of the "Manufacture of Pulp and Paper" prepared under the direction of the Joint Vocational Education Committee as textbook.

The pamphlet cannot fail to be very helpful to all employees of pulp and paper mills who are ambitious to improve themselves in the art of pulp and paper making.

THINGS TO TELL YOUR MEN*

By George E. Roberts, Vice-Pres. of National City Bank

Aladdin rubbed the magic lamp and a genie appeared—a powerful giant of superhuman powers, who rolled away huge stones, transported Aladdin over great distances, and created for him treasures and palaces far beyond his wildest dreams.

Since the early history of old Bagdad, the tale of Aladdin and his wonderful lamp has thrilled the imaginations of old and young alike, yet the marvels of a genie's power are scarcely as striking as those that have been wrought by man himself through the use of capital in the form of machine tools and power equipment.

So amazingly has man's ability to produce goods and services grown over the past seventy-five years, for example, that today each of us has five times the amount of manufactured goods to use and enjoy as had our grandparents only three-quarters of a century ago. Take manufactured cloth as an illustration. The output per man employed in the textile industry has increased almost a hundred fold within the past forty years alone. Think what this has meant to the masses of men and women who use cotton clothing!

Increased Output Cuts Rail Price

Since 1880, the production of steel in the United States has increased thirty-fold, although the population has little more than doubled. The first steel rails ever made for a railroad sold for $230 a ton, according to reliable authority; prior to the late war the price was $28.50 a ton, due to improvements in manufacturing methods and the economies of mass production. Today one worker with modern machinery can supply all the shoes needed in a year by 1,000 men, while the labor cost of making one hundred pairs of shoes has fallen from $408—under old hand methods—in 1850 to about $35 in 1900 under the modern method of machine manufacture.

A smilar increase has taken place in the output of the farms, and in the production of food products. Estimates are that 50 to 75 per cent of the labor employed on the farms and in the factories in 1866 could have produced the total of that year in 1880; for the manufacture of shoes, the figure is 80 per cent; for the manufacture of machinery, 40 per cent; for making silks, 50 per cent.

A modern reaper, with three horses and a driver, will perform as much work in the wheat field today as was done fifty years ago by from five to seven men working under the old hand methods. The labor cost of growing a bushel of wheat dropped from 133 minutes per bushed in 1830 to ten minutes per bushel in 1904. These figures are more or less typical of the transformations that have taken place throughout all industry under the improvements in methods which have been developed during the past century.

We have noted in a previous chapter that there are four factors in production, and that man in a primitive state can meet his barest wants by employing two of them alone—namely, land or natural resources and labor. So long as there are fish in the seas, game in the forests or in the air, and fruits and vegetables growing wild, the simple wants of the human body can be met by the strength in the hands and arms alone. But such an existence is hazardous and poverty-stricken. To advance beyond that something else is necessary. Men must take thought for the future and plan for the future. They must develop means of increasing and improving production. They must build up an equipment for assuring them a steady supply of goods and services to minister to their wants. This productive equipment we term *capital.*

Capital Is Not Really Money

Capital is defined as goods or wealth, other than natural resources, which are not made to be consumed directly but are devoted to still further increasing production. Examples of such goods are tools and machinery of all kinds, factories, plants, and store buildings, steamships, railroads, and all the agencies of transport. Although expressed oftentimes in terms of money, capital is not money but the tools and goods that money will buy. It is the productive equipment of society.

There are several important things about capital that need to be more widely understood, but two of the most important are:

1. Where capital comes from.
2. Whom capital serves.

With these two points clearly grasped, much of the confused thinking that is encountered in many quarters is quickly dissipated.

First, it should be made clear that all capital results from saving. Society cannot have capital goods unless it deliberately produces them for future needs instead of producing something else to be immediately enjoyed. Capital is created only because men choose not to consume all that they have produced. It comes from denial, in the making of things not for immediate use but for purposes of production tomorrow and a year from tomorrow.

Let us consider again the case of Robinson Crusoe when he decided to make himself a boat. He had to devote a certain portion of his time every day to laboriously hewing the craft from a great log. He might have devoted the same time to wandering about his island, to trapping game or catching fish, even to sleeping under a tree. But he denied himself these pleasures and spent his time in completing the boat, which, when finished, enabled him to explore his island more widely than had been possible before, and also to increase greatly his food supply, and his command over his environment. The boat represented time and effort of Crusoe which had been saved from that essential to meet the daily needs of his body, and which has been deliberately devoted to increasing his powers of production. The boat became a part of Crusoe's capital.

Savings of Many Build Plants

That saving is necessary to create capital is apparent when a carpenter puts aside a certain portion of his wages to buy a work bench or a new saw, or a farmer withholds from the market or feed bin a certain quantity of grain to be used for seed next year. But it is not always clear that when a great factory is built up from sums collected from hundreds of individuals scattered throughout the country, the factory also comes into existence because of saving. Yet it is obvious that the sums of money contributed by each individual were first saved and put aside before the money could be available for financing the construction of the plant.

The American Telephone and Telegraph Company, for example, has more than 300,000 stockholders. This great company, with the largest number of stockholders of any American corporation, is owned entirely by these individuals, and the money they have invested in it for the purpose of improving and extending the telephone system of the country was first saved by them out of incomes before it could be devoted to that purpose.

Not all saving, however, is done by individuals. The corporations themselves are savers, and their savings supply much of the capital needed to develop industry. Instead of distributing all of their earnings in the form of dividends, it is the practice of the most prosperous concerns to pay dividends at a moderate rate, such as can be steadily maintained through the varying fluctuations of the business conditions, and to hold the balance from the good years in a surplus fund, out of which can be financed extensions to the plant and business.

Because these savings are shown in the reports of the corporations as additions to their surplus, it is not always clear that they are just as much savings as are the savings of individuals, or that they are used to increase the supply of capital at the service of society.

Neither does the public fully understand how large a portion of

* From *The Nation's Business.*

the profits of industry, in the form of additions to surplus, go back into industry where they result in improved or cheapened production. The public view often is that profits benefit only an individual, and that they have no productive uses. The truth is that a large part of the profits earned in business in the United States have been reinvested in business and industry. With many manufacturing and mining corporations, for example, there is a more or less accepted policy to set aside as much as one-third of the net income to be reinvested, and during the Great War many companies reinvested as high as half of their total net income.

A striking example of how a gigantic industry can be constructed almost entirely out of profits is afforded by the Ford Motor Company.

"We had little money when we began to build that car," said Mr. Ford, in a recent interview. "We took out small wages for ourselves and put back the profits into better machinery, which enabled us to reduce prices. We made more money and put that back. Our profits began to be large, so we were able to put that money into more and more machinery, which enabled us not only to bring the price of the car down, but also to raise our wages, first to a minimum of $5, and then to a minimum of $6 a day. We were able still further to spread in the way of going back to the sources of materials, in employing more people, and in making things cheaper and cheaper. We did not spend the money we made. We put it into production. What is the consequence? I have what is said to be a large fortune, but in only a very small sense is it mine. It has gone to the support of ten million people. It has permitted the farmer and his wife to come to town whenever they liked. It has let millions of people get out into the fresh air, and it has made the automobile a thing that the poor man can have and enjoy to the utmost." Now, this statement from Mr. Ford suggests another important point. Since capital arises from saving, it is apparent that the savings of persons of very large incomes is an important source of capital. Here again we encounter an erroneous idea held by many people. The impression is abroad in many quarters that a very rich man's income is somehow or other reserved for his own exclusive use. Many persons talk as though it were locked up in a private vault somewhere, or buried deep in the ground, where only the owner can get at it, and that the public derives no benefit. Such, of course, is not the case.

Those who receive large incomes want to use them so as to make a return on them, and the only way they can do so is to use them to increase production in some manner. To bury this money or lock it up some place, would be to deprive themselves of a return which they naturally desire to have.

The fact is, that the large portion of additions to private wealth are in the form of equipment for adding to production, or for improving it. The wants of the very rich are relatively limited, and beyond the amounts that they themselves consume for food and other requirements of living, the balance finds its way back into productive use.

In the same interview with Henry Ford quoted above, he states that should the Government tax away 99 per cent of his income, he could probably continue to live just as he now does on the remaining one per cent. There is a limit on the amount of goods which a man can consume for himself, and over and above that the incomes of the very rich go to increase the capital equipment of society.

Since the very rich are comparatively few in number, large wealth cannot find profitable employment in catering to the wants of the rich alone. The great masses of the people furnish the widest market, and enterprises that cater to their wants offer the most fruitful opportunities and the most attractive return.

Labor Derives Major Benefits

It should be realized, too, that the gains from invested wealth are distributed not according to the ownership of the wealth but to the way in which the products are consumed. The goods turned out by our chief industries are widely distributed; there are millions of people who own scarcely any property that consume hundreds of dollars' worth of goods every year. Estimates of how wealth is distributed take little account of this great, continuous flow of goods and services which goes to meet the needs of the population. The great bulk of the flow naturally goes to wage earners in exchange for current services.

If we listen to many of the critics of privately owned capital, however, we find this point overlooked. They seem to assume that the only people who derive benefit from capital are its owners, and that the great mass of the people come in for little or nothing. This, of course, is like saying that nobody derived any benefit from the development of the Ford automobile but Henry Ford.

The truth is, that the industrial equipment of society, although privately owned, is in the public service, and constitutes the machinery through which public wants are supplied.

Statistics of Paper Bag Plants

WASHINGTON, D. C., September 29, 1924.—The Department of Commerce announces that, according to data collected at the biennial census of manufacturers, 1923, the establishments engaged primarily in the manufacture of paper bags reported products valued at $40,953,386, of which amount $39,442,973 was contributed by paper bags and $1,510,413 by other products. The rate of increase in the total value of products as compared with 1921, the last preceding census year, was 13 per cent.

In addition, paper bags are manufactured to some extent by establishments engaged primarily in other industries—principally paper mills. The value of the bags thus made outside the industry proper in 1921 was $4,269,721, an amount equal to 11.8 per cent of the value of products reported for the paper-bag industry. The corresponding value for 1923 has not yet been ascertained but will be shown in the final reports of the present census.

Of the 62 establishments reporting for 1923, 17 were located in New York, 12 in Ohio, 9 in Pennsylvania, 4 in Wisconsin, and the remaining 20 in California, Georgia, Illinois, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, Texas, and West Virginia.

The statistics for 1923 and 1921 are summarized in the statement below. The figures for 1923 are preliminary and subject to such correction as may become necessary upon further examination of the returns.

	1923	1921	Per Cent of Increase (a)
Number of establishments	62	57	....
Wage earners (average number)b	4,549	3,707	22.7
Maximum month	Jan. 4,667	Dec. 4,752	....
Minimum month	Dec. 4,360	June 3,016	....
Per cent of maximum	93.4	63.5	....
Wages	$4,466,447	$3,475,487	28.5
Paid for contract work	$4,101	$1,529	168.2
Cost of materials (including fuel and containers)	$28,380,427	$25,097,329	13.1
Products, total value	$40,953,386	$36,255,601	13.0
Paper bags	$39,442,973	$34,438,273	14.5
Other products	$1,510,413	$1,817,328	—16.9
Value added by manufacture c	$12,572,959	$11,158,272	12.7
Horsepower	5,824	(d)	....
Coal consumed (tons of 2,000 lbs.)	19,641	(d)	....

a A minus sign (—) denotes decrease. Per cent not computed where base is less than 100.
b Not including salaried employees and proprietors and firm members. Statistics for these classes will be given in final report.
c Value of products less cost of materials.
d Not reported.

To Be Superintendent of Midvale Co.

ROSSMAN, N. Y., September 29, 1924.—M. Erhardt is the superintendent of the Midvale Paper Board Company which recently bought the mill of the Hoboken Paper Mills Company, Inc., here. Mr. Erhardt was formerly superintendent of the Continental Paper Company at Bogota, N. J.

The Midvale Paper Board Company will make containers, single and double manila patent coated bristol board and high grade specialties mill a capacity of 100,000 pounds per 24 hours.

HEALTH SERVICE WORK IN PAPER MILLS

(*Continued from page* 38)

be outlined. She is limited only by time and her initiative. Upon her visit to an absent employee she may find the employee sick and without a doctor. The case may be more serious than the family consider it to be. The nurse can make the patient comfortable and advise him to call a physician. If he is a stranger and without knowledge of a capable doctor, she may advise him of several who would render him proper service. If after the doctor's call it seems advisable to remove the patient to the hospital, she can make arrangements to have him taken there, and often accompany him on the trip.

If as so often occurs, the wife is sick and the husband unable to go to work because there is no one to do the housework and to take care of the children, the nurse will arrange to have someone to do this work and to have the regular nursing organization render the proper nursing service. So at the time when the employee may be most in need of his income, he is able to be on the job and earn it. You have the services of a man who may be the factor between a good and a poor sheet of paper. The Visiting Nurse will carry into the home instruction in Sanitation and Hygiene. This must of course be done tactfully and carefully. But it is being done to the great good of Communities by the Visiting Nurses of many Industries. Finally may I add this on the subject of the Industrial Visiting Nurse? Don't make your Nurse a truant officer, and unless you can have your nurse approach her work in the way above outlined, do not have her go at all. Your workmen do not want to have their family life investigated by a representative of their employer, no matter under what pretext she may come. The Visiting Nurse has a definite duty to perform relating to the physical well being of the employee. Sooner or later she will beget the confidence and the friendship of the employee and those surrounding him and then other opportunities for service may become apparent and she will be able to carry on her constructive work.

Sanitation a Preventative

Sanitation is Preventative Medicine. It has an important place in Health Service in any Industry. It has been defined as the service "which deals with the control of the external factors of environment which affect the health of the workers". These factors are ventilation, temperature, lighting, drinking water, humidity, sanitary appliances and dust.

The planning of proper appliances to meet these various factors will be a joint duty for the Medical and Engineering Departments. The erection and maintenance in good operating condition will fall upon the Engineering Department. The study of its efficiency, the maintenance of cleanliness and the checking of its effect upon the health of the worker, are sanitary duties which fall to the lot of the Health Service and rightly so.

In carrying out this work in most organizations, the regular routine work connected with Sanitation is delegated by the chief Medical Officer to one of his staff. This employee will be directly responsible to the Physician in charge and should have control over the Sanitary Corps which may be organized as the conditions in the individual plant may require. These men will have as their duties, the cleaning of the plant and the various offices, toilet, locker and bath rooms, the care of cuspidors if such a service is maintained.

At this point I want to say something about plant cleaning as so often carried out. It is done in a rather perfunctory way and then a large amount of some coal tar disinfectant mixed with water is thrown about in a hit and miss fashion. As a result of the resulting smell, the employees for the most part get a false sense of security and often ill results follow. It must be borne in mind that no destruction of bacterial life will result unless the agent used for the purpose come into actual contact with the bacteria. There are no better germicidal agents than fresh air and sunlight. It is our own plan in caring for toilets to clear up all of the paper and litter which might be upon the floor, then to thoroughly wash down the floors with a hose, being particularly careful to get into the corners. This in turn is followed by the thorough mopping of the floor with hot water applied with a mop. We give each toilet one such treatment a day and are able to keep them in a condition free of disagreeable odors which result from the decomposition of bodily excreta.

The problem of promiscuous spitting is always one of the health problems which requires attention. Most of you are acquainted with the various makeshifts which will appear about the plant for use as cuspidors: Nail kegs, boxes of all descriptions, any kind of a container that is handy or meets the fancy of the employee. We have adopted a renewable cuspidor which has a container board cone which sets in a metal frame. This cone is partially filled with moistened sawdust. These cuspidors are scattered throughout the entire plant and are renewed each day. The man who has this duty to perform has a wagon which he can move from place to place. In one compartment he has the sawdust and new cones in the other compartment—space in which to throw the used cones. At the completion of his rounds these used cuspidors are destroyed by burning.

Ventilation Is Important

Particularly should we give attention to the ventilation of our plants. If a number of persons breathe air which is not renewed regularly, chemical changes take place in the atmosphere which lead to an increased amount of carbon dioxide and a lessened amount of oxygen. Physically the air increases in humidity and in temperature. As a result those breathing it become dull, have a sensation of "stuffiness," notice an unpleasant odor and sooner or later have an increasing headache due to the toxicity of the atmosphere. As a result lowered efficiency and a condition prejudicial to health exist. Ventilation corrects this condition as it reduces abnormal heat and humidity, brings in the requisite oxygen and acts as a stimulant and thus makes for better working conditions and better and more product. Ventilation may be either natural or mechanical. Natural where the natural air currents are used; mechanical in those cases where mechanical devices such as fans are brought into use. Whatever the system it should be carefully controlled and maintained. Especially would I call attention to humidity. With our modern methods of heating we have not considered the problems of the proper maintenance of the desirable degree of moisture in the air. In some parts of our Mills we have too much—in others not enough. We must remember the basic thought that the higher the temperature of the air, the greater amount of moisture it will hold and the greater the amount of moisture in the air the more difficult it will be for the human body to maintain an even body temperature. As a result the temperature of the body will rise and become a distinct menace to health. In some departments it will be necessary, if there is too great an amount of moisture, to use fans to keep the air in active motion; in others where there is a lack of moisture below a certain percentage it may be necessary to supply the moisture by use of humidfiers.

Light will receive considerable attention from the Physician working in the Paper Industry. The fact that paper making is a continuous process necessitates that proper lighting be furnished in order that the interest of all parties to the making of the product may be safeguarded. Most states have worked out Codes for proper lighting. The National Safety Council has recommended a code. We should remember three principles in artificial lighting. These are: absence of glare, distribution and intensity. Intensity can be measured and partially controlled by seeing that the lights are properly maintained. New lamps to replace those which have burned out, cleaning lights and reflectors, painting the walls in some light color in order that the light rays be not absorbed from a dark, dingy

wall. Distribution means proper placement and a proper number of lamps Glare can best be controlled by the proper hanging of the fixture, proper placing of the shades and the use of the proper type of reflector.

Drinking water—The importance of a sufficient supply of cool, clear, clean drinking water is self-evident. As most mills have their own water supplies, the Psysician in charge should make or have made regular test of the water. Bacteriologic examinations are sufficient. If there is any question as to the purity of the water, chlorination should be immediately resorted to.

The type of drinking fountain is important. The modern fountain with the side jet outlet so placed that it is impossible for the drinker to place his lips over it and also that no water from his mouth may fall into it to contaminate it, is the desirable type. Water should be of a temperature of 50° when possible. Warm water nauseates, while water that is too cold will cause stomach and bowel troubles. Outside of the dust which one finds in the rag and paper sorting departments in varying amounts, the dust hazard does not exist in most mills. In the departments named however, the hazard should be given careful attention. The stocks here sorted come from many different sources. The processes involved in sorting, cutting and beating them for cleansing, aggravate the hazard. It is well to bear in mind that organic dusts do not act as irritants to the degree that inorganic dusts do. These later cause a decided irritation of the upper air passages and the lungs and may set up an inflammation of a serious nature. The Health Service should take steps together with the Mechanical Department to correct and eliminate the hazard, which can be readily done by proper ventilation. Thus it will be seen that Medical Service includes in its various activities those which have to do with instruction in personal hygiene, diagnosis, medical treatment, first aid and subsequent surgical treatment of accident cases, reconstruction work, research and mill health and sanitation. All of these or any part of them when properly instituted can be of great service to the workers and to management, and will do much to bring about that time which all of us have long wished for when all parties to Industry—men and management and capital shall understand each other and no longer fear or suspect one another.

I can find no more appropriate thought to close this paper than that which the Hon. W. L. Mackenzie King uses in ending his book "Industry and Humanity".

"Is it too much to believe that, having witnessed Humanity pass through its Gethsemane, having seen its agony in its Garden of Fears, having beheld its crucifixion upon the cross of Militarism, Labor and Capital will yet bring to a disconsolate and broken hearted world the one hope it is theirs alone to bring, and that, in the acceptance of principles which hold deliverance from the scourges that beset Mankind, they will roll back the stone from the door of the world's sepulchre today and give to Humanity the promise of its resurrection to a more abundant life?"

Consolidated Paper Co. Using Trucks

MONROE, Mich., September 29, 1924.—Use of motor trucks and trailers has made material savings in time and delivery costs, officials of the Consolidated Paper Company report. The concern now has eight trucks and 16 trailers operating between Monroe, Toledo and Detroit, and has just installed a complete unit of truck and two trailers at its Glenfield, Pa., plant.

Under the system used by the Consolidated, one trailer is being loaded while the other is in transit. The time required to switch the truck from one trailer to the other at terminals is less than two minutes. This method permits constant use of the truck throughout the working day.

"In a business involving the handling of bulky loads, considerable time is consumed in loading," said E. C. Rauch, president of the Consolidated. "Because of the elimination of this waste through the trailer system, the greater load hauled per trip and better delivery service, a substantial saving in trucking costs results. The greater speed of the 2½-ton truck, as compared to the 5- or 6-ton models necessitated if trailers are not used, is another important factor in the operation of this equipment."

Maintenance Crew of Niagara Mill

The picture shown herewith is of the Maintenance and Construction crew of the Niagara Mill, at Niagara, Wis., one of the units of the Kimberly-Clark Company. The picture was taken on the occasion of boosting their safety man over the two hundred year mark, for which they have received the prize for a second time. The prize consists of a crisp new $5.00 bill for each individual, in addition to a Safety watch fob.

This crew consists of about one hundred men who have now passed one thousand consecutive days without an accident. This is one division of the crew which laid claim to "The Safest Paper Mill Crew in the World."

Anyone who understands the work that a paper mill maintenance crew must do will agree that this is a wonderful record. The superintendent of this record breaking crew is F. W. Johnson, shown in the front row, seated, the fourteenth man from the left. He is a regular guy and one of the gang, which is probably one of the best reasons for their good Safety record.

They challenge other Maintenance crews to show a better record.

MAINTENANCE AND CONSTRUCTION CREW KIMBERLY-CLARK CO., NIAGARA, WIS.

Storage and Sprinkler Tanks as well as Processing Tanks and Acid Towers to meet all Paper Mill requirements. High grade Cypress, Cedar, or Fir —well seasoned. Immediate shipment. Expert erecting crews to install.

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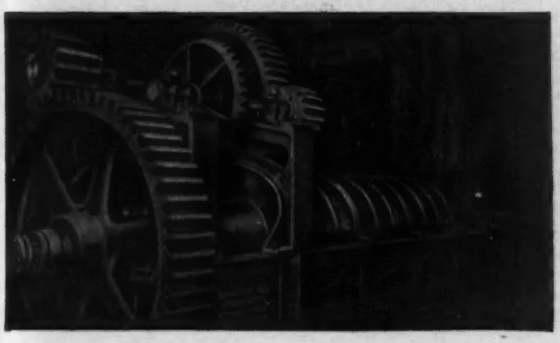
J. W. HEWITT MACHINE CO.
Neenah, Wisconsin

Hard Maple and Gumwood Press Rolls.
Whitewood and Red Wood Felt Rolls.
Brass Felt and Table Rolls.
Iron Cores for Rubber Rolls.
Bronze Doctor Blades.
Bronze Suction boxes and Covers.
Bronze Castings of all descriptions.



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FOR DEWATERING PULP

ADVANTAGES

1. AUTOMATIC—requiring a minimum of labor to operate.
2. CONTINUOUS IN ACTION—hence large saving in power and increase in capacity.
3. ECONOMICAL IN POWER—small power required to operate.
4. HEAVY CONSTRUCTION—hence requiring a minimum of repairs.

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SEND FOR SAMPLES AND PRICES

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING SEPTEMBER 27, 1924

SUMMARY

News print.....1,387 rolls, 253 bls.
Printing paper.....173 rolls, 144 cs., 22 bls.
Wall paper.....92 rolls, 14 cs.
Filter paper.....16 bls., 5 cs.
Wrapping paper.....50 rolls, 201 bls., 11 cs.
Drawing paper.....22 cs.
Cigarette paper.....26 cs.
Baryta coated paper.....211 cs.
Paper hangings.....7 bls., 1 cs.
Decalcomania paper.....9 cs.
Metal paper.....27 cs.
Colored paper.....21 cs.
Tracing paper.....2 cs.
Writing paper.....20 cs.
Miscellaneous paper.....40 cs., 160 bls.

CIGARETTE PAPER

P. J. Schweitzer, Paris, Havre, 26 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., American Trader, London, 7 bls., 1 cs.

WALL PAPER

Whiting & Patterson, Inc., Mauretania, Havre, 14 cs.

National City Bank, Muenchen, Bremen, 92 rolls.

NEWS PRINT

Parsons & Whittemore, Muenchen, Bremen, 541 rolls.

Chemical National Bank, by same, 310 rolls, 65 bls.

W. Hartmann & Co., Thuringia, Hamburg, 188 bls., 351 rolls.

M. Gottesman & Co., Inc., by same, 185 rolls.

PRINTING PAPER

Hudson Trading Company, Thuringia, Hamburg, 173 rolls.

Perry, Ryer & Co., Assyria, Glasgow, 110 cs.

C. Steiner, G. Washington, Bremen, 19 cs.

C. Steiner, A. Ballin, Hamburg, 15 cs.

J. P. Heffernan Paper Company, by same, 22 bls.

WRAPPING PAPER

Textile Paper Tube Company, Aurania, Liverpool, 46 rolls.

National City Bank, Thuringia, Hamburg, 75 bls.

J. P. Heffernan Paper Company, by same, 40 bls.

C. K. MacAlpine Company, by same, 4 rolls.

International Acceptance Bank, by same, 86 bls.

F. L. Kramer & Co., Innoko, Antwerp, 11 cs.

COLORED PAPER

E. Daiber, Innoko, Antwerp, 5 cs.

P. H. Petry & Co., A. Ballin, Hamburg, 10 cs.

Import Metal Leaf & Bronze Powder Company, by same, 6 cs.

TRACING PAPER

Keuffel & Esser, Reeclute, Hamburg, 2 cs.

METAL PAPER

Hensel, Bruckman & Lorbacher, Resolute, Hamburg, 23 cs.

Hensel, Bruckman & Lorbacher, G. Washington, Bremen, 4 cs.

DECALCOMANIA PAPER

L. A. Consmiller, Muenchen, Bremen, 6 cs.

C. W. Sellers, G. Washington, Bremen, 3 cs.

BARYTA COATED PAPER

Globe Shipping Company, G. Washington, Bremen, 99 cs.

Globe Shipping Company, Muenchen, Bremen, 112 cs.

WRITING PAPER

White-Burbank Paper Company, Assyria, Glasgow, 3 cs.

Marcus Ward, Inc., by same, 6 cs.

F. C. Strype, Veendam, Rotterdam, 3 cs.

J. Kennedy, La Bourdonnais, Bordeaux, 8 cs.

FILTER PAPER

J. Kennedy, La Bourdonnais, Bordeaux, 4 cs.

H. Reeve Angel & Co., Inc., by same, 16 bls.

Meadows, Wye & Co., Majestic, Havre, 1 cs.

DRAWING PAPER

Keuffel & Esser, Thuringia, Hamburg, 22 cs.

PAPER

Chemical National Bank, Thuringia, Hamburg, 160 bls.

Whiting & Patterson, Inc., Mauretania, Southampton, 3 cs.

J. Kennedy, La Bourdonnais, Bordeaux, 3 cs.

F. E. Wallace & Co., A. Ballin, Hamburg, 5 cs.

Hensel, Bruckman & Lorbacher, Paris, Havre, 3 cs.

Guibout Freres, by same, 17 cs.

Tiffany & Co., by same, 3 cs.

Du Pont Cellophane Company, by same, 6 cs.

RAGS, BAGGING, ETC.

E. J. Keller Company, Inc., Mount Clay, Hamburg, 158 bls. new cuttings, 100 bls. rag pulp, 89 bls. rags, 62 bls. bagging.

Castle & Overton, Inc., by same, 41 bls. rags.

South American Trust Company, by same, 86 bls. rags.

Second National Bank of Boston, by same, 230 bls. bagging.

Union National Bank, by same, 22 bls. rags.

E. J. Keller Company, Inc., K. Maru, Leghorn, 80 bls. rags.

M. Wolfer, Orizaba, Havana, 15 bls. rags.

Brown Brothers & Co., Coelleda, Dublin, 176 bls. waste paper.

Prince & Kennedy, by same, 21 bls. rags.

Castle & Overton, Inc., Coelleda, Belfast, 64 bls. rags.

National Bank of Commerce, Muenchen, Bremen, 80 bls. rags.

Bankers' Trust Company, by same, 171 bls. rags.

Garfield National Bank, by same, 82 bls. rags.

E. J. Keller Company, Inc., Blydendyk, Rotterdam, 106 bls. rags.

Atterbury & McKelvey, by same, 149 bls. rags.

S. Birkenstein & Sons, by same, 72 bls. rags.

Whaling Waste Products Company, by same, 87 bls. rags.

Anglo South American Bank, Assyria, Glasgow, 140 bls. rags.

L. H. Abenheimer, by same, 61 bls. rags.

State Bank, by same, 74 bls. rags.

Royal Manufacturing Company, Pres. Garfield, Kobe, 200 bls. cotton waste.

E. J. Keller Company, Inc., Thuringia, Hamburg, 50 bls. rag pulp.

E. J. Keller Company, Inc., Spain Maru, Hamburg, 66 bls. rags.

Garfield National Bank, by same, 245 bls. rags.

Bankers' Trust Company, by same, 184 bls. rags.

Chase National Bank, by same, 63 bls. rags.

Brown Brothers & Co., Archimedes, Manchester, 114 bls. rags.

Katzenstein & Keene, Inc., by same, 80 bls. new cuttings.

L. H. Abenheimer, by same, 72 bls. bagging.

G. M. Graves Company, Innoko, Antwerp, 77 bls. rags.

Mathes & Co., by same, 99 bls. rags.

E. J. Keller Company, Inc., by same, 256 bls. rags.

W. Schall & Co., Marengo, Hull, 280 bls. rags.

Brown Brothers Company, by same, 303 bls. rags.

R. Wolf, Veendam, Rotterdam, 62 bls. rags.

Atterbury & McKelvey, by same, 105 bls. rags.

D. M. Hicks, by same, 60 bls. rags.

E. J. Keller Company, Inc., by same, 67 bls. rags.

Castle & Overton, Inc., by same, 58 bls. rags.

Atlas Waste Manufacturing Company, by same, 61 bls. paper stock.

Reis & Co., by same, 46 bls. thread waste.

E. J. Keller Company, Inc., West Elcasco, Leghorn, 81 bls. rags.

E. J. Keller Company, Inc., Zeeland, Antwerp, 105 bls. flax waste.

Katzenstein & Keene, Inc., Cabo Espartel, Marseilles, 117 bls. rags.

P. Berlowitz, by same, 154 bls. rags.

Castle & Overton, Inc., Brazideer, Antwerp, 333 bls. baggings.

Royal Manufacturing Company, by same, 54 bls. cotton waste.

Katzenstein & Keene, Inc., Volendam, Rotterdam, 293 bls. rags, 6 bls. bagging.

Salomon Brothers & Co., Legie, Hamburg, 145 bls. rags.

Salomon Brothers & Co., A. Ballin, Hamburg, 193 bls. rags.

Salomon Brothers & Co., Pr. Garfield, Marseilles, 258 bls. rags.

Salomon Brothers & Co., Pr. Adams, Marseilles, 200 bls. rags.

Salomon Brothers & Co., Cabo Villano, Marseilles, 43 bls. rags.

Salomon Brothers & Co., Rhode Island, Dundee, 78 bls. flax waste.

Salomon Brothers & Co., Madonna, Marseilles, 271 bls. rags.

Salomon Brothers & Co., Editor, Dunkirk, 10 bls. linen waste.

Salomon Brothers & Co., Amasis, Marseilles, 150 bls. rags.

Salomon Brothers & Co., Schodack, St. Nazaire, 46 bls. linen waste.

Salomon Brothers & Co., Pipestone County, Havre, 25 bls. rags.

Salomon Brothers & Co., West Eldara, Havre, 45 bls. flax waste.

Salomon Brothers & Co., Assyria, Glasgow, 238 bls. flax waste.

Salomon Brothers & Co., Vincent, Havre, 45 bls. thread waste.

Salomon Brothers & Co., Cabo Hatteras, Genoa, 47 bls. thread waste.

Salomon Brothers & Co., Patria, Marseilles, 79 bls. rags.

Salomon Brothers & Co., Crofton Hall, Rio Janeiro, 110 bls. rags.

Salomon Brothers & Co., Muskegon, Havre, 523 bls. rags.

OLD ROPE

Brown Brothers & Co., Mt. Clay, Hamburg, 35 coils.

Brown Brothers & Co., Thuringia, Hamburg, 16 coils.

Brown Brothers & Co., Veendam, Rotterdam, 262 coils.

Brown Brothers & Co., Resolute, Hamburg, 15 coils.

Brown Brothers & Co., Marengo, Newcastle, 322 coils.

S. Birkenstein Sons, by same, 170 coils.

Philadelphia National Bank, by same, 133 coils.

Philadelphia National Bank, Assyria, Glasgow, 76 coils.

Salomon Brothers & Co., Segundo, Marseilles, 145 coils.

Salomon Brothers & Co., Pr. Giovanna, Marseilles, 194 coils.

WOOD PULP

J. Anderson & Co., Muenchen, Bremen, 625 bls. wood pulp.

M. Gottesman & Co., Inc., Veendam, Rotterdam, 1,250 bls. wood pulp.

National City Bank, Spain Maru, Hamburg, 1,758 bls., 274 tons wood pulp.

Johaneson, Wales & Sparre, Inc., Braheholm, Sundsvall, 2,100 bls. sulphate pulp.

BALTIMORE IMPORTS

WEEK ENDING SEPTEMBER 27, 1924

Castle & Overton, Inc., Sac City, Rotterdam, 1,917 bls. wood pulp.

E. J. Keller Company, Inc., West Inskip, Rotterdam, 462 bls. wood pulp.

Salomon Brothers & Co., F. Bulow, Hamburg, 27 coils old rope.

Johaneson, Wales & Sparre, Inc., Trollerholm, Gothenburg, 1,500 bls. kraft pulp.

(Continued on page 60)

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Tear it
Test it
and you will specify it

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"The Nation's Business Paper"

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QUALITY PULPS

"HAFSLUND BEAR"
Bleached Sulphite

"FORSHAGA"
Bleached Sulphite

"HURUM SPECIAL"
Extra Strong Kraft

"BAMBLE"
Extra Strong Kraft

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KALAMAZOO VEGETABLE PARCHMENT CO.

Manufacturers of
PARCHMENT, WAXED and BOND PAPERS

KALAMAZOO, MICHIGAN
Where *Quality* is the watchword.

FRIENDSHIP

"Friendship has that subtle power,
Like perfume of a fragrant flower,
Like faintest tone of music sweet,
Like spell of happiness complete.
It sort o' wraps you round and round
When you've a perfect friendship found."

Helpfully yours,
K. V. P. Co.

Perforated Metal Screens

For Pulp and Paper Mills

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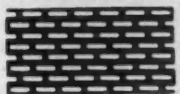

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STEEL, COPPER, BRASS, BRONZE and other Alloys

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Builders of Mechanical Stokers for 36 years

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So. Philadelphia Works, Philadelphia, Pa.

WESTINGHOUSE ELECTRIC

Westinghouse

Imports of Paper and Paper Stock

(*Continued from page 58*)

NEW ORLEANS IMPORTS

WEEK ENDING SEPTEMBER 27, 1924

Castle & Overton, Inc., Tripp, Rotterdam, 230 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING SEPTEMBER 27, 1924

D. J. Murphy, Innoko, Antwerp, 37 bls. rags.
Bank of New York, by same, 66 bls. rags.
Castle & Overton, Inc., by same, 531 bls. rags.
Belgian Bank, by same, 235 bls. rags.
Philadelphia National Bank, by same, 344 bls. rags.
E. J. Keller Company, Inc., by same, 72 bls. rags, 111 bls. new cuttings.
E. J. Keller Company, Inc., Texas Maru, Hamburg, 107 bls. rags.
E. J. Keller Company, Inc., Burgerdyk, Rotterdam, 46 bls. rags.
E. J. Keller Company, Inc., Burgerdyk, Amsterdam, 65 bls. rags.
E. J. Keller Company, Inc., Seattle Spirit, Hamburg, 81 bls. rags.
E. J. Keller Company, Inc., Adalia, Hamburg, 502 bls. rags.
E. J. Keller Company, Inc., Adalia, Stockholm, 206 bls. rags.
E. J. Keller Company, Inc., Cabo Espartel, Marseilles, 166 bls. rags.
Stone Brothers & Co., by same, 229 bls. rags.
Castle & Overton, Inc., Cabo Espartel, Leghorn, 79 bls. rags.
Castle & Overton, Inc., Naperian, Antwerp, 79 bls. rags.
Castle & Overton, Inc., Coaxet, Rotterdam, 300 bls. rags.
Castle & Overton, Seattle Spirit, Hamburg, 310 bls. rags.
Castle & Overton, Inc., Texas, Copenhagen, 438 bls. rags.
Castle & Overton, Inc., Odenwala, Hamburg, 229 bls. rags.
Castle & Overton, Inc., London Exchange, London, 659 bls. waste.
Castle & Overton, Inc., Adalia, Hamburg, 94 bls. rags.
Salomon Bros. & Co., Winona, Marseilles, 120 bls. rags.
Salomon Bros. & Co., London Exchange, London, 81 bls. rags.
Castle & Overton, Inc., Texas, Norway, 1,520 bls. wood pulp.
Castle & Overton, Inc., ———, Germany, 1,030 bls. wood pulp.
Lagerloef Trading Company, West Maximus, 583 tons chemical pulp.

BOSTON IMPORTS

WEEK ENDING SEPTEMBER 27, 1924

Pagel Horton & Co., Inc., West Maximus, Scandinavia, 3,600 bls. dry sulphite pulp, 7,200 bls. sulphate pulp.
F. S. Webster & Co., Rexmore, Liverpool, 16 cs. tisue.
G. F. Malcolm, by same, 17 cs. tissue.
Bulkley Dunton Co., Braeholm, Scandinavia, 5,000 bls. dry chemical pulp.
The Borregaard Co., by same, 500 bls. dry chemical wood pulp.
Second National Bank, Maryland, London, 211 bls. rags.
G. W. Miller & Co., by same, 75 bls. waste paper.
Coal & Iron National Bank, by same, 22 bls. paper stock.
Brown Bros. Co., by same, 189 bls. old rope.
Baring Bros. Co., Ltd., by same, 388 bls. old rope.
G. W. Wright Paper Co., by same, 186 bls. waste paper.
H. R. Angel & Co., by same, 63 bls. printing paper.
Crocker Burbank & Co., by same, 128 bls. waste paper.
On order, by same, 330 bls. old rags.
Johaneson, Wales & Sparre, Inc., Modig, Kramfors, 3,900 bls. kraft pulp.

Philadelphia Paper Men Meet

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., September 29, 1924.—A most representative gathering of the paper trade was present on Thursday evening of last week in the Bourse restaurant to listen to N. A. Schoenbucher, Cost Accountant of the National Paper Trade Association, and William C. Ridgway, Secretary of the National Association, in a presentation of the present problems of the paper merchant. The audience was almost 300 in number, constituted of both salesmen and executives of the paper trade.

After the transaction of routine business, trade conditions and prospects for fall and winter business were discussed. The Paper House of Pennsylvania was elected to membership in the Wrapping Paper Division. L. A. Peck, who has been placed in charge of the newly created wrapping paper department of the Paper House will represent the company at the meetings.

Following the meeting of the full Association, the regular bimonthly meeting of the Fine Paper Division was held. Routine matters were discussed, following which the Trade Relations Committee reported that the Typothetæ were interested in having the Paper Merchants join in on their waste paper disposal plan. The proposition was outlined fully, following which the members of the Fine Paper Division all expressed their desire to investigate the matter thoroughly, so that they might enjoy whatever benefits were to be secured from the bulk sale of their waste paper, and also to co-operate by throwing in whatever tonnage they had to offer with the Typothetæ printers' collections. At the next meeting, each house will report approximately the tonnage available per month, and it is expected that within a short time, the Paper Merchants' tonnage will be joined with the printers'.

Some Improvemnt in Wisconsin

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., September 30, 1924.—Although there has been some improvement in the paper market, as seen by Wisconsin paper manufacturers, the real return of good business will not be until after the presidential election in November, according to prominent millmen here. Economic savants have said it is the condition of business which determines the trend of politics but manufacturers here hold more to the belief that business can be and is seriously affected by politics. For that reason they are not very hopeful of a real improvement in business until after the votes are counted in November.

If Robert M. LaFollette is a real factor in determination of the present presidential race, Wisconsin manufacturers will not only be disappointed but surprised. These men have had so much experience with LaFollette ideas in Wisconsin that it is quite difficult for them to understand how voters in other states, not swayed by his personality and by the terrific machine he has built up in Wisconsin, can take unto themselves that which he has given his own state.

Wisconsin probably is the highest taxed state in the union and no state has the multitude of laws and regulations aimed at business as will be found here. The vast majority of these laws are directly attributable to LaFollette for he has always had the power to have stopped their passage if he had been opposed to them. Voters outside of Wisconsin away from the magnetism of the candidate can study these things without prejudice, and Wisconsin manufacturers, laboring under LaFolletteism, cannot understand the Badger senator's strength, if it is as great as reported in the newspapers.

News of the Boston Paper Trade

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., September 29, 1924.—Local jobbing business for the week has been good but shows a little falling off over the past three weeks. However this is thought to be nothing more than due to the fact that it is nearing the end of the month and many purchasers desire to wait until the first of the month before making new commitments. Salesmen from territories outside immediate Boston territory report good business in such points as Maine and Connecticut, and Rhode Island business has been fully up to a standard.

Norman Harrower, sales manager of Linton Bros., Fitchburg, Mass., was in the Boston trade this week.

Carl Lincoln, formerly sales manager for the American Writing Paper Co. and now with Hamilton & Sons, Philadelphia, was in the Boston market this week calling on his trade friends. Mr. Lincoln reports his mill as being busy.

Storrs & Bement Co. have taken the exclusive New England representation of the line of KROYDON cover papers manufactured by the Holyoke Card and Paper Company of Holyoke, Mass. They will carry it in medium weight, in rolls and in flats stock also, and in seven colors. Other weights and sizes carried at the mill for immediate delivery.

A Remarkable Range of Grades, Textures and Weights

Orr Endless Felts can now be obtained up to 86 feet in length.

With our enlarged new equipment we can now furnish Paper Manufacturers with endless felts up to 86 feet in length.

Paper Manufacturers who carefully check manufacturing costs, and also strive to produce more and better paper at a lower cost per ton, prefer the unvarying quality and long service of ORR felts. A trial of them will bring about a preference that will be lasting.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

CASEIN

Standard Quality
Lowest Prices

The Casein Manufacturing Company

15 Park Row **New York**

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.
Woolen manufacturers since 1856

THE WM. CABBLE EXCELSIOR WIRE MFG. CO.

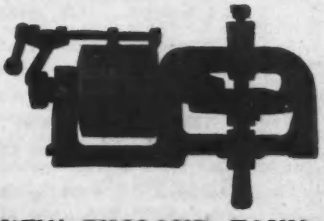
Established 1848
Incorporated 1870-1896

Manufacturers of Superior Fourdrinier Wires
Brass, Copper and Iron Wire Cloth of every Description.
Best Quality of Wire Rope.

Write for Price List

74-90 Ainslie St. **BROOKLYN, N. Y.**

AGITATOR DRIVES



Six Stock Sizes
Special Designs
"NETT-CO" line is complete from smallest to largest.

NEW ENGLAND TANK & TOWER CO.
30 CHURCH ST., N. Y. **EVERETT, MASS.**

Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

Stocks	BID	ASKED
Abitibi Power and Paper Company, Ltd.	57½	57⅝
Abitibi Power and Paper Company, Ltd, Pfd.	98¾	99
American Writing Paper Company, Pfd.	2½	2¾
Brompton Pulp and Paper Company, Ltd.	31	31⅛
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	48	48¼
International Paper Company, Pfd.	74	75
Laurentide Company, Ltd.	83¾	84
Price Brothers	41¾	42¼
St. Maurice Paper Co., Ltd.	84	86
Smith (Howard) Paper Mills, Ltd.	26	29
Spanish River Pulp and Paper Mills, Ltd.	106⅝	106⅞
Spanish River Pulp and Paper Mills, Ltd., Pfd.	117	117⅛
Union Bag and Paper Corp.	39½	40
Wayagamack Pulp and Paper Company, Ltd.	37	38
West Virginia Pulp and Paper Company	53	58

Bonds	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934	98½	99
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940	95	96½
Abitibi Power and Paper Company, Ltd., Con. 8s 1931	102½	103½
Belgo Canadian Paper Company, 1st 6s 1943	96½	97
Brown Company Serial 6s	97½	98½
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944	94	95
Donnacona Paper Company, Ltd., 1st 6s 1940	98	100
Eddy Paper Company, 1st 7½s 1931	94	95½
Gair (Robert) Company, 1st 7s 1937	98½	99
International Paper Company, 1st and Ref. 5s (Series "B") 1947	86	87
Mattagami Pulp and Paper Company, 1st 6s 1937	58	60
Mattagami Pulp and Paper Company, 1st 7s 1949	20	25
Oswego Falls Corporation, 1st 8s 1942	101½	102
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	97½	99½
Parker, Young Company, 1st 6½s 1944	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	96½	98½
Peshtigo Paper Company, 1st 7s (Series "B") 1942	92	94
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943	98½	99½
Provincial Paper Mills, Ltd., 1st 6s 1940	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929	18	22
Riordon Pulp and Paper Company, Ltd., 6s 1942	91	93
Riordon Company, Ltd., 1st and Ref. 8s 1940	94	96
River Raisin Paper Company, 1st 8s 1936	104	105
Smith (Howard) Paper Mills, Ltd., 6s 1934	95	95½
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941	90	95
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931	102½	103
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	106	106½
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper

F. o. b. Mill	
Ledgers	11.00 @38.00
Bonds	9.00 @45.00
Writings—	
Extra Superfine	14.00 @30.00
Superfine	14.00 @30.00
Tub Sized	10.00 @15.00
Engine Sized	8.00 @11.00
News—	
Rolls, contract	3.65 @ 3.90
Rolls, transit	3.75 @ 4.25
Sheets	4.15 @ 4.40
Side Runs	3.25 @ 4.00
Book, Cased—	
S. & S. C.	8.00 @ 9.50
M. F.	7.50 @ 8.85
Coated and Enamel	9.00 @15.00
Lithograph	9.00 @14.00
Tissues—	
White No. 1	.75 @ .90
White No. 2	.70 @ .80
Colored	1.05 @ 1.90
Anti-Tarnish	1.40 @ 2.30
Kraft	.90 @ 1.00
Manila	.75 @ .80
Kraft—	
No. 1 Domestic	5.50 @ 6.25
No. 2 Domestic	5.00 @ 5.75
Imported	5.50 @ 5.75
Manila—	
No. 1 Jute	9.00 @
No. 2 Jute	7.75 @ 8.50
No. 1 Wood	4.75 @ 5.25
No. 2 Wood	4.00 @ 4.50
Butchers	3.75 @ 4.00
Fibre Papers—	
No. 1 Fibre	5.50 @ 5.75
No. 2 Fibre	4.75 @ 5.25
Common Bogus	2.50 @ 2.75
S. Screening	3.25 @ 3.75
Card Middler	4.00 @ 5.00

Boards—per ton—	
News	50.00 @52.50
Straw	50.00 @55.00
Chip	37.50 @42.50
Binders' Boards	75.00 @80.00
Sgl. Mla. Ll. Chip	55.00 @62.50
Wood Pulp	70.00 @75.00
Container	62.50 @67.50
Sulphate Screenings—	
Coarse	.80 @ .90
Refined	1.75 @ 2.00
Ground Wood—	
Screenings	20.00 @25.00
Glassine—	
Bleached, basis 25 lbs.	12.00 @15.00
Bleached, basis 20 lbs.	14.00 @17.00

Mechanical Pulp

(Ex-Dock)	
No. 1 Imported	35.00 @40.00
(F. o. b. Mill)	
No. 1 Domestic	27.50 @34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)	
Sulphite (Imported)—	
Bleached	3.75 @ 4.50
Easy Bleaching	2.90 @ 3.15
No. 1 strong unbleached	2.75 @ 3.00
No. 2 strong unbleached	2.50 @ 2.75
No. 1 Kraft	2.75 @ 2.85
Sulphate—	
Bleached	3.50 @ 3.65
(F. o. b. Pulp Mill)	
Sulphite (Domestic)—	
Bleached	3.50 @ 4.50
Easy Bleaching Sulphite	2.60 @ 3.00
News Sulphite	2.50 @ 2.75
Mitscherlich	3.00 @ 3.50
Kraft (Domestic)	2.75 @ 3.00
Soda Bleached	3.90 @ 4.10

Domestic Rags

New Rags	
Prices to Mill, f. o. b. N. Y.	
Shirt Cuttings—	
New White, No. 1	14.00 @15.00
New White, No. 2	7.00 @ 7.75
Silesias, No. 1	8.00 @ 9.00
New Unbleached	10.50 @11.00
Washables	5.50 @ 6.15
Fancy	6.50 @ 7.75
Blue Overall	7.75 @ 8.25
New Blue	5.00 @ 5.50
New Black Soft	4.75 @ 5.25
New Light Seconds	3.00 @ 3.25
O. D. Khaki Cuttings	4.50 @ 4.75
Men's Corduroy	4.00 @ 4.25
New Canvas	7.00 @ 7.50
New Black Mixed	2.75 @ 3.00

Old Rags	
White, No. 1—	
Repacked	6.25 @ 6.75
Miscellaneous	5.50 @ 5.75
White, No. 2—	
Repacked	4.25 @ 4.50
Miscellaneous	3.75 @ 4.00
St. Soiled, White	3.00 @ 3.50
Thirds and Blues—	
Repacked	4.00 @ 4.25
Miscellaneous	3.00 @ 3.25
Black Stockings	3.50 @ 3.75
Roofing Rags—	
Cloth Strippings	1.90 @ 2.00
No. 1	2.40 @ 2.50
No. 2	2.30 @ 2.40
No. 3	1.20 @ 1.30
No. 4	1.20 @ 1.30
No. 5A	1.80 @ 1.50

Foreign Rags

New Light Silesias	7.50 @ 8.75
Light Flannelettes	8.00 @ 8.25
Unbl'chd Cottons	9.50 @10.00
New White Cuttings	11.50 @12.50
New Light Oxfords	7.75 @ 8.25
New Light Prints	7.25 @ 7.75
New Mixed Cuttings	3.25 @ 3.75
New Dark Cuttings	3.00 @ 3.50
No. 1 White Linens	10.00 @11.00
No. 2 White Linens	7.00 @ 8.00
No. 3 White Linens	6.00 @ 6.50
No. 4 White Linens	4.50 @ 5.50
Old Extra Light Prints	4.50 @ 5.00
Ord. Light Prints	3.00 @ 3.50
Med. Light Prints	2.40 @ 2.50
Dutch Blue Cottons	3.50 @ 4.00
Ger. Blue Cottons	3.00 @ 3.25
Ger. Blue Linens	3.50 @ 4.00
Checks and Blues	2.25 @ 2.50
Dark Cottons	1.50 @ 1.75
Shoppery	1.40 @ 1.60
French Blues	3.25 @ 3.75

Bagging

Prices to Mill F. o. b. N. Y.	
Gunny No. 1—	
Foreign	1.80 @ 2.00
Domestic	1.75 @ 2.00
Wool, Tares, light	1.50 @ 1.60
Wool, Tares, heavy	1.50 @ 1.60
Bright Bagging	1.40 @ 1.50
Sound Bagging	.90 @ 1.00
Manila Rope—	
Foreign	6.25 @ 6.50
Domestic	6.50 @ 6.75
New Bu. Cut	2.40 @ 2.60
Hessian Jute Threads—	
Foreign	2.25 @ 2.50
Domestic	2.10 @ 2.20

Old Waste Papers

(F. o. b. New York)

Shavings—	
Hard, White, No. 1	3.50 @ 3.75
Hard, White, No. 2	3.25 @ 3.50
Soft, White, No. 1	3.00 @ 3.25
Flat Stock—	
Stitchless	1.60 @ 1.70
Over Issue Mag.	1.60 @ 1.70
Solid Flat Book	1.45 @ 1.55
Crumpled No. 1	1.25 @ 1.35
Solid Book Ledger	1.80 @ 1.90
Ledger Stock	1.60 @ 1.70
New B. B. Chips	.50 @ .55
Manilas—	
New Env. Cut	2.45 @ 2.55
New Cut. No. 1	1.75 @ 2.00
Extra No. 1 old	1.40 @ 1.50
Print	1.20 @ 1.30
Container Board	1.00 @ 1.10
Bogus Wrapper	1.00 @ 1.10
Old Krafts Machine compressed bales	2.10 @ 2.20
News—	
No. 1 White News	1.65 @ 1.75
Strictly Overissue	1.05 @ 1.15
Strictly Folded	.95 @ 1.05
No. 1 Mixed Paper	.75 @ .85
Common Paper	.55 @ .65

Twines

Cotton—(F. o. b. Mill)—	
No. 1	.43 @ .48
No. 2	.41 @ .43
No. 3	.40 @ .42
India, No. 6 basis—	
Light	.19 @ .20
Dark	.17 @ .19
B. C., 18 basis	.39 @ .41
A. B. Italian, 18 Basis	.51 @ .61
Finished Jute—	
Dark, 15 basis	.30 @ .31
Light, 18 basis	.28 @ .30
Jute Wrapping, 3-6 Ply—	
No. 1	.20 @ .23
No. 2	.18 @ .20
Tube Rope—	
4-ply and larger	.15 @ .17
Fine Tube Yarn—	
5-ply and larger	.20 @ .28
4-ply	.21 @ .24
3-ply	.22 @ .25
Unfinished India—	
Basis	.14 @ .15
Paper Makers' Twine	
Balls	.12 @ .13
Box Twine, 2-3 ply	.14 @ .15
June Rope	.20 @ .40
Amer. Hemp, 6	.30 @ .32
Sisal Hay Rope—	
No. 1 Basis	.14 @ .16
No. 2 Basis	.10 @ .12
Sisal Lath Yarn—	
No. 1	.14 @ .15
No. 2	.11 @ .13
Manila Rope	.18 @ .19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper

F. o. b. Mill	
All Rag Bond	35 @ 40
No. 1 Rag Bond	25 @ 35
No. 2 Rag Bond	14 @ 25
Water Marked Sulphite	9 @ 12
Sulphite Bond	6½ @ 10¼
Sulphite Ledger	9½ @ 12
Superfine Writing	18 @ 24
No. 1 Fine Writing	14 @ 18
No. 2 Fine Writing	12 @ 14
No. 3 Fine Writing	9 @ 12
No. 1 M. F. Book	5½ @ 7½
No. 1 S. & S. C. Book	6½ @ 7¾
Coated Book	8 @ 10
Coated Label	8 @ 10
News—Rolls, mill	3¾ @ 4½
News—Sheets, mill	4 @ 4¾
No. 1 Manila	4¾ @ 6½
No. 1 Fibre	4¾ @ 5½
No. 2 Manila	3½ @ 4½
Butchers' Manila	4 @ 4½
No. 1 Kraft	6 @ 6¼
No. 2 Kraft	5½ @ 5½
Wood Tag Boards	4½ @ 6
Sulphite Screenings	2½ @ 2¾
Manila Tissue, 20x30 sheet	7½ @ —
White Tissue, 24x36 sheet	7½ @ —
Boards, per ton—	
Plain Chip	50.00 @52.50
Solid news	52.50 @57.50
Manila Line Chip	60.00 @62.50
Container Lined—	
85 Test	70.00 @72.50
100 Test	75.00 @77.50

Old Papers

F. o. b. Chicago	
Shavings—	
No. 1 Hard White	3.25 @ 3.30
White Envel. Cuttings	3.25 @ 3.30
No. 1 Soft Shav.	3.15 @ 3.25
No. 1 Mixed	1.65 @ 1.75
No. 2 Mixed	1.60 @ 1.70

Ledgers and Writings	1.75	@	1.80
Solid Books	1.70	@	1.75
No. 1 Books, Light	1.35	@	1.40
Blanks	210	@	2.15
Ex. No. 1 Manila	2.30	@	2.40
Manila Envelope Cuttings	2.50	@	—
No. 1 Manila	1.20	@	1.25
Folded News (over issue)	1.00	@	1.05
Old Newspapers—			
No. 1	.95	@	1.00
No. 2	.90	@	.95
Mixed Papers—			
No. 1	.90	@	.95
No. 2	.80	@	.85
Straw Clippings	1.00	@	—
Binders' Clippings	1.00	@	—
Kraft	2.15	@	2.25
New Kraft Cuts	2.25	@	2.35
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	$42.00	@	—
No. 2	40.00	@	—
No. 3	38.00	@	—
No. 4	38.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper

Bonds	.09½	@	.53
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F.	.09¼	@	.12¼
Book, S. S. & C.	.11	@	.15
Book, Coated	.14¼	@	.20
Coated Lithograph.	.10	@	.15
Label	.10	@	.15
News	.06	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.10
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.03½	@	.04
Shaw Board	55.00	@	60.00
News Board	42.50	@	—
Chip Board	40.00	@	42.50
Wood Pulp Board. (Carload Lots)	2.75	@	3.00
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply.	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	1.75	@	1.85
Domestic	1.75	@	2.00
Manila Rope	5.00	@	5.50
Sisal Rope	2.50	@	—
Mixed Rope	1.25	@	—
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings	1.00	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.50	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	3.40	@	3.60
No. 2, Hard White	3.25	@	3.40
No. 1 Soft White	3.10	@	3.25
No. 2 Soft White	2.00	@	2.25
No. 1 Mixed	2.00	@	—
No. 2 Mixed	1.25	@	1.30
Solid Ledger Stock.	1.65	@	1.85
Writing Paper	1.50	@	1.75
No. 1 Books, heavy	1.45	@	1.60
No. 2 Books, light.	1.15	@	1.25
No. 1 New Manila.	2.40	@	2.50
No. 1 Old Manila.	1.50	@	1.75
Container Manila.	1.25	@	1.40
Old Kraft	2.15	@	2.25
Overissue News	1.05	@	1.10
Old Newspaper	1.05	@	1.40
No. 1 Mixed Paper.	.80	@	.90
Common Paper	.65	@	.70
Straw Board, Chip.	.65	@	.70
Binders Bd., Chip.	.65	@	.70

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12	@	.13
New White, No. 2	.07	@	—
Silesias, No. 1	.08¼	@	.08½
New Unbleached.	.11½	@	.11¾
Washable	.05½	@	.05¾
Fancy	.07	@	.07¼
Cottons—according to grades—			
Blue Overall	.09¼	@	.09½
New Blue	.03½	@	.03¾
New Black Soft	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10¼	@	.11
New Black Mixed	.05	@	.05¼
Old White, No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05½
Miscellaneous	.04¼	@	.05¼
Thirds and Blues—			
Repacked	3.65	@	3.85
Miscellaneous	3.15	@	3.25
Black Stockings	4.00	@	4.50
Roofing Stock—			
No. 1	2.30	@	240
No. 2	2.20	@	2.30
No. 3	1.15	@	1.20
No. 4	2.10	@	2.20
No. 5A	1.40	@	—
B	1.25		nominal
C	1.15		nominal

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite).	—	@	.15
Writing	.09¼	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.65	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rap	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$28.00	@	30.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	50.00	@	55.00
Sulphite, bleached.	80.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	3.60	@	—
Soft White Book shavings	3.00	@	—
White Blk. News	1.90	@	—
Book and Ledger—			
Flat Magazine and Book Stock(old)	1.50	@	—
Light and Crumpled Book Stock	1.35	@	—
Ledgers and Writings	1.75	@	—
Solid Ledgers	1.75	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas.	1.20	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	1.00	@	—
Folded News	1.00	@	—
No. 1 Mixed Papers	—	@	.85
Domestic Rags—			

Price to mills, f. o. b. Toronto Per lb.

No. 1 White shirt cuttings	.14	@	.14¼
No. 2 White shirt cuttings	.07	@	.07½
Fancy shirt cuttings	.07½	@	.08
No. 1 Old Whites.	—	@	—
Third and blues	.05½	@	.05¾

Per cwt.

Black stockings	.04	@	—
Roofing stock:			
No. 1	2.20	@	—
No. 2	2.10	@	—
Manila rope	.06	@	.06¼
No. 2	1.55	@	—

BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag Content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.14
Rag Content	.16	@	.33½
All Rag	.36½	@	.51
Writings	.08½	@	.20
Superfines	.20	@	.48
News	.04	@	.06½
Bock, M. F.	.06½	@	.10¾
Bock, Super	.07½	@	.11
Book, Coated	.09½	@	.20
Coated Litho.	.10	@	.15
Label	.09½	@	.15
Jute Manila No. 1.	.12	@	.13
Manila, Sul. No. 1.	.05	@	.06
Manila, Sul. No. 2.	.03½	@	.04¼
No. 1 Kraft	6¼	@	.06½
No. 2 Kraft	.05¾	@	.05½
Common Bogus	.03½	@	.04
Straw Board	50.00	@	55.00
News Board	47.50	@	50.00
Chip Board	45.00	@	47.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slater's	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	4.25
White Blank News.	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White.	3.10	@	3.25
No. 2 Soft White.	2.25	@	2.50
No. 1 Mixed.	1.60	@	1.75
No. 2 Mixed.	1.25	@	1.50
Solid Ledger Stock.	2.00	@	2.25
Writing Paper	—	@	1.70
No. 1 Books, Heavy	1.60	@	1.80
No. 1 Books, Light	1.40	@	1.50
No. 1 New Manila.	2.50	@	2.60
No. 1 Old Manila.	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	1.20
Old Newspapers	.90	@	1.00
No. 1 Mixed Paper.	.85	@	.90
Box Board, Chip	.85	@	.90

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	1.12½	@	2.00
Domestic	2.00	@	2.12½
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	1.62½
Scrap Burlaps	1.25	@	1.50
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings	1.50	@	1.62½
New Burlap Cuttings	2.00	@	2.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.13½	@	.14
Silesias, No. 1	.09	@	.09½
New Unbleached.	.12½	@	.13
Washable	.06	@	.06½
Fancy	.07	@	.07¼
Cottons — according to grades, Blue Overall	.09½	@	.10
New Blue	.05½	@	.06
New Black, soft	.06	@	.06¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.50	@	7.00
White No. 2—			
Repacked	5.50	@	6.00
Miscellaneous	4.75	@	5.50
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	3.00	@	3.25
Roofing Stock—			
No. 1	2.25	@	2.37
No. 2	2.12½	@	2.25
No. 3	1.50	@	1.75
No. 4	1.15	@	1.20

Laurens County, Ga., Wants Pulp Mill

DUBLIN, Ga., September 25, 1924.—Laurens county, according to the *Savannah News*, is just now engaged in a campaign to secure several million stumps in order to insure the location here of a pulp and paper plant. Prominent citizens are heading teams sent to rural sections to secure signatures of farmers who are willing to permit removal of stumps from their property and indications are that a sufficient number will be secured at an early date and actual construction probably will begin on the mill and plant early in the fall.

Wealthy New York business men are behind the proposal to locate the plant here and have agreed on Dublin as the logical center. Such a plant will cost more than $2,000,000 and will be located here for a period of not less than twenty years. It is estimated that 150,000 acres of stump lands will be needed.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, October 1, 1924.

The advent of October finds the paper market occupying a much more advantageous position than it occupied at the beginning of September. Fall business did not start off with a great deal of impetus, but business, in almost every line of paper, has improved steadily and consistently all the month. Today, looking back over the month, the fact becomes more forcible that the outlook for the paper trade is much brighter than it was a month ago. It would be exaggerating to say that conditions have been restored to normal, but it is no exaggeration to say that every department of the trade is headed back toward normalcy and that most departments have already made very substantial progress in that direction. If there is any one thing which is today retarding the paper business, as it is probably retarding practically every line of endeavor, it is the old alibi for poor business—political apprehension. It is no new thing for politics during a Presidential year to throw a wet blanket over business and paper men surmise, as they have surmised for a considerable time, that political doubts and misgivings are at the root of most of the business ailments. Some of them argue that American business is very fortunate that it has not been more seriously shaken in view of the very unusual complexion of the present political campaign. Varied issues have been brought into the campaign, each of which is calculated to appeal to some particular faction. Labor, the farming element and other factions have been more or less stirred up and the third party is complicating matters as they could not be complicated if the two old parties were dominating the field. It has all gone to produce a condition where the average man believes that almost anything or everything might happen, and the conservative are inclined to wait and see just what will happen rather than trust to random guesses. Some believe that this conservative attitude has been carried to an excess in many instances, but there are many evidences of the fact that doubts and misgivings are slowly wearing away and that business is becoming convinced that the approaching Presidential election holds no great danger for it. Under those circumstances conditions should steadily improve until election time and then it is believed that a flood of pent up business will break with volcanic force in the business arena, flowing through all the arteries of trade and closing 1924 with banner business conditions. Prices in the paper market are, for the most part, holding firm. Production at the mills is gaining and the general demand is constantly picking up.

News print sprinted forward again during the past week. There is a much better demand for it than there has been for weeks. Right here in New York the demand is excellent. A new newspaper has joined the ranks, while all the old newspapers seem to be challenging each other with the sizes of their daily editions. The Fall advertising campaigns are on and the newspapers show that the big advertisers are not being frightened by any cry of poor business, but are advertising on an unprecedented scale. This all means more demand for news print.

Book papers continue to gain ground. Fine papers are meeting a readier demand. The call for board has improved materially and even tissues are showing greater activity than for a long time. Inquiries are many, showing that immediate buying is in the minds of many who have been deferring the placing of their orders until the last possible moment.

Mechanical Pulp

Mechanical pulp is in good demand. Prices are firm and there is little available stock in the market. It is very likely that a price increase may occur here within a short time.

Chemical Pulp

The chemical pulp market is steadily gaining in strength. Stock has been permitted to get very low and the mills are now replenishing the stock in preparation for the Fall demand. The prices abroad are unusually high and an increase in price schedule is a reasonable certainty.

Rags

There has been a slight slackening of demand in the rag market, but prices have not been materially affected. Prices on some of the lower grades show a disposition to come down, but the prices on all the higher grades remain firm.

Old Rope and Bagging

The old rope demand is slightly better and prices remain as they have been. There is not much bagging demand, but more inquiries are being received from the mills which seems to indicate coming business. An upward trend in prices is predicted.

Waste Paper

Fore some unaccountable reason the waste paper market fell off a trifle last week and some of the prices came down. Business in this line should be at its best at this time and the slight reaction is hard to account for.

Twine

Twine is picking up very slowly, but not as it should do in view of the long period of slackness it has experienced. The new price schedule which dealers were on the point of putting into effect a month ago is still being held off and the prices will probably remain fixed where they are until a more favorable time.

Wisconsin Paper Man Injured

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., September 30, 1924.—George W. Burnside, president and principal owner of the Burnside Paper Company at Neenah, was fatally injured last week when his automobile was struck by a train in Appleton. His young woman companion was killed instantly.

Mr. Burnside had been connected with the paper industry in the Fox river valley for many years. He was manager of the Lakeside Paper Company until its sale to the Combined Locks Paper Company a few years ago, and also was connected with other firms in this vicinity.

W. L. Davis of the Dells Pulp and Paper Company, Eau Claire, narrowly escaped serious injury last week as he was returning to his home from Neenah, where he spent the summer at his summer home. His automobile was struck by another car and tipped over in a ditch. Mrs. Davis was shook up and bruised and was taken to a hospital but her injuries were not serious.

Green Bay Paper Men Ask Freight Reduction

[FROM OUR REGULAR CORRESPONDENT.]

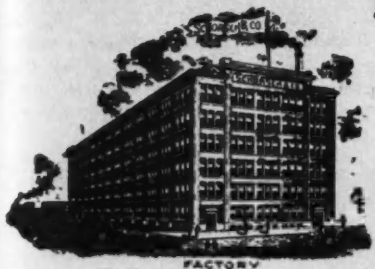
APPLETON, Wis., September 30, 1924.—Green Bay manufacturers and shippers of crepe tissue paper have filed an intervening petition with the Interstate Commerce commission in the effort of the Jackson Paper Company, Jackson, Miss., to have the commission reduce the freight tariff on carload shipments of crepe paper. The Jackson company's petition, it is stated, is a direct blow at the Green Bay manufacturers who have built up their business on their ability to ship crepe and plain tissues in mixed shipments. Under the present arrangements crepe and plain tissue are considered as being the same for the purpose of fixing tariffs.

In the intervening petition, the Green Bay manufacturers and shippers oppose the attempt to separate plain tissue paper from crepe paper in shipping and ask protection for the industry developed in Green Bay.

To Be Superintendent of Montville Mill

MONTVILLE, Conn., September 29, 1924.—Austin B. Calvin, formerly superintendent of the Waltham Paper Mill at Waltham, Mass., has accepted the position of superintendent of the plant of the Montville Paper Company here.

The Home of Quality



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Importers of Chemical Pulps

BLEACHED and UNBLEACHED

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, October 1, 1924.

Substantial improvement characterized the past week in the chemical market. True, conditions have been showing improvement there for several weeks, but last week made the most vivid gain that the market has shown since business turned from its sluggishness and took a really forward course. The paper industry demand has particularly shown improvement. Not only are more and better orders coming from this source at the present time than for many weeks but the industry is indicating by its frequent inquiries that it is anticipating the early necessity of buying on a more generous scale. General business conditions from all reports continue to look brighter and most of the large chemical-using trades and industries are today in a much more active state than they were a month ago. The effect of all this has reached the chemical market although the full force of it has probably not broken over the market yet. It is this thought that convinces chemical men that exceedingly good business in every line is close at hand and that they will have no cause for complaint as to the volume of business which will be done between now and the first of the year. The increased demand is keeping supplies reduced to a minimum and hardly an item can be mentioned where surplus stock may really be said to exist. The new price schedules which are being awaited with such anticipation have not come through yet and it may be some weeks before they are announced. As many believe that prices on some of the commodities will be lower than they now are this is probably influencing some buyers to curtail their orders as much as possible until they know definitely the new price. In the meanwhile the prices are holding firm and concessions of any sort are rarely looked for and more rarely located.

BLANC FIXE.—Blanc Fixe which has been one of the slowest of the commodities and which has been answering to a very slight demand participated in the general improvement recorded in the market during the past week. The demand can by no means be regarded as good but the slight improvement is regarded as significant. The price holds firm at from $75 to $80 a ton for the powder and from $50 to $55 for the pulp.

BLEACHING POWDER.—Bleaching power continues to attract a good demand but little new regarding it occurred during the week. This is one of the items on which the new price schedule is looked for but the manufacturers have not yet made their announcement which probably has a tendency to curb the buying somewhat. The price still stands at from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—Caustic soda is having a very active demand just now and because of the small amount of stock in the market the demand is right up to the supply and at times ahead of it. The price has not been effected, however, and is still from 3.10 to 3.15 cents a pound on a flat basis at the works.

CASEIN.—Casein is moving slowly. Even the better tone of the market during the past week did not stimulate it to any great extent. The price holds at from 10½ to 11 cents a pound.

CHINA CLAY.—China clay had one of the best weeks it has experienced in some time. Not only was there a quickening of demand but the many inquiries received regarding it indicated a new interest that is bound to materialize into better business. It is selling at from $16 to $20 a ton for the imported grades and from $12 to $15 a ton for the domestic.

CHLORINE.—Chlorine is doing very well but here again the new price schedule is eagerly awaited and its failure to come through is probably keeping back business. The price is from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—Both the foreign and domestic demand is making business continually better for rosin. The number of inquiries being received shows the buyers getting more and more into a receptive mood. The market price is $6.00 but sales at a slightly higher figure are quite frequently made.

SALT CAKE.—Salt cake is getting better all the time. Many orders are coming in for immediate shipment whereas such business as there was a short time ago was for the future. The glass trade is settling down to its active season's business now and this is stimulating the demand for salt cake. The quotation is still from $17 to $20 a ton.

SODA ASH.—A fairly good week was experienced by soda ash. The demand is slowly getting back to where it should be and the price holds at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphate of Alumina is still forging ahead. It has made a very decided improvement during the past two weeks and its future is apparently bright. It is quoted at from 1.30 to 1.35 cents for the commercial grade at the Eastern works and from 2.10 to 2.25 cents a pound for iron free.

SULPHUR.—Sulphur is going along at its steady gait with users taking out their contract quantities at stated intervals. The quotation remains from $18 to $19 a ton.

TALC.—Talc demand is actually showing a semblance of activity. Business is not anything to boast of but compared with the dull times talc has seen the improvement is most favorable. It is still selling at from $16 to $17 a ton.

New England Paper Merchants Meet

BOSTON, Mass., September 29. 1924.—The first Fall Meeting of the New England Paper Merchants Association was held on September 25 at the Harvard Club, Boston, and was well attended. Many affairs of local interest were handled and a very lively session and one full of interest was had under the direction of President Blackman of the D. F. Munroe Paper Company, Boston. As the annual fall conference of the National Paper Merchants Association is close at hand and as there were many matters to study in order that the New England viewpoint might be properly presented at that meeting, it was decided to hold separate weekly meetings of the coarse and fine paper committees in order that points of common interest to each division might be discussed without taking up the time of the other.

The fall conference will be held in Chicago, October 13-14-15. A number of local firms will be represented at this convention. At the conclusion of the Thursday night meeting, Mr. Potter of the Potter Confectionery Company, Cambridge, Mass., gave an illustrated lecture on his recent trip around the world. Mr. Potter is an interesting talker with a keen eye for the unusual in travel scenes and had made many of these slides from personally photographed scenes and had of course many interesting anecdotes to tell of his trip. The lecture was unusual and most interesting.

Paper Moved by Railroad Cars

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., October 1, 1924.—Figures which have just been made public by the Interstate Commerce Commission show that for the quarter ended June 30, 94,163 carloads of paper weighing 2,283,294 tons were moved by class 1, railroads of which 31,555 cars weighing 757,542 tons originated on respondent's road.

The statement shows also that during the same period 79,359 cars of pulpwood were moved weighing 2,355,925 tons of which 41,254 cars weighing 1,293,393 tons originated on the respondent's road.

B. T. McBain Back from Motor Trip

PORTLAND, Ore., September 30, 1924.—B. T. McBain, for the past three years manager of manufacturing of the Nekoosa Edwards Paper Company, Port Edwards, Wis., has arrived here after a motor trip of nearly 3,500 miles and has opened an office in the Spaulding Building. Mr. McBain was formerly assistant resident manager of the Crown Willamette Paper Company of Portland.